

# COMINAK: Mine Closure and Remediation

Information pack



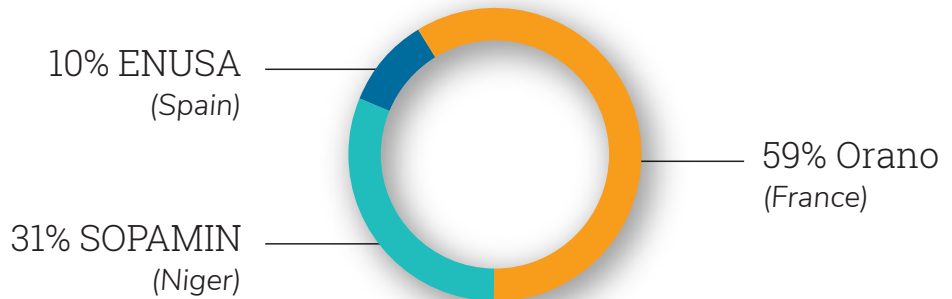
**On March 31, 2021, the Akouta mine in Niger operated by COMINAK ceased production after more than 40 years of service and 75,000 tonnes of uranium extracted.**

Stopping mining activities was decided by its Board of Directors October 23, 2019. This date of March 31, 2021 also marks the start of the site remediation project.





## Shareholdings 2021\*



## MINE CLOSURE & REMEDIATION PROJECT

COMINAK, created on June 12, 1974, produced some 75,000 metric tons of uranium in total over the period between 1978 and the end of 2019.

After mining the deposits at Akouta, Akola and Ebba in the Agadez region since 1978, the depletion of its reserves means that COMINAK can no longer continue its operational activity.



### MESSAGE FROM MOUSSA SOULEY

COMINAK Managing Director

After more than forty years of mining,

the depletion of our deposits has become reality. Our vision is to conduct our closure and remediation project in accordance with national regulations and international best practices and standards, with the involvement of stakeholders, so that together we can carry out this phase responsibly.

\* Since the end of February, Orano Mining holds 59% of the capital in COMINAK after acquisition of the stake held by one of the historical shareholders, the Japanese company OURD.



# Our commitments

Within the framework of the remediation project at the COMINAK site, we undertake to engage in continuous and transparent dialogue and communication with stakeholders, to carry out remediation work that will make the site safe and non-polluting, in compliance with national standards and international guidelines, to support our employees and subcontractors in a conversion plan and in the development of eligible and viable entrepreneurial projects, and to act for a lasting, sustainable and useful social transition for the local communities.

More specifically, in the context of the end of mining operations at the Akouta site and the remediation works that will follow, COMINAK makes this series of commitments:



## **On completion of the works, to have restored the site to a condition that is safe, healthy, and non-polluting, in compliance with national standards and international guidelines**

- Begin remediation work as soon as production activities are completed
- Implement an appropriate environmental monitoring plan from the outset, over an initial 5-year regulatory monitoring period, extendable if conditions require
- Carry out a comprehensive diagnostic and treat the radiologically contaminated premises in the town of Akokan in accordance with the criteria defined in the radiation measurement that was validated on a tripartite basis in 2010
- Limit as far as possible the extent of radiologically contaminated land plots in the industrial zone
- Keep the total Annual Additional Effective Dose to within or below 1 mSv for the local population
- Ensure the physical stability of the storage facilities
- Guarantee the stability of the remediation work carried out on mine workings open to the surface
- Conduct treatment and monitoring of aquifers so that the drinking water supplied to Arlit meets national and international drinking water standards (WHO)



## **To support our employees and subcontractors in the reconversion plan**


- Advise each employee on a professional reconversion
- Set up appropriate support measures for each employee
- Accompany employees and subcontractors in eligible and viable entrepreneurial projects
- Provide former employees who were exposed to ionizing radiation with free post-professional medical monitoring within the framework of OSRA (the Health Observatory of the Region of Agadez)



## **To act for a long-term, sustainable social transition that is of practical benefit for the local population**

- Involve local stakeholders in the decision-making process prior to closure and in the monitoring of site remediation work
- Support the process through ongoing and transparent communication
- Transfer the mining town's electricity and drinking water networks to the companies in charge of water and electricity distribution in Niger
- Transfer housing and amenities from the mining town to the State
- Transfer the hospital from COMINAK to the State over a period of 3 to 5 years, and provide support for an additional 5 years
- Support the continuation and, if possible, the development of vegetable growing activities in Akokan
- Promote the reconversion of people economically impacted by the closure through support for entrepreneurship
- Set up an ambitious program calling on local and national sub-contractors and labor for the conduct of the remediation work

# Remediation Project

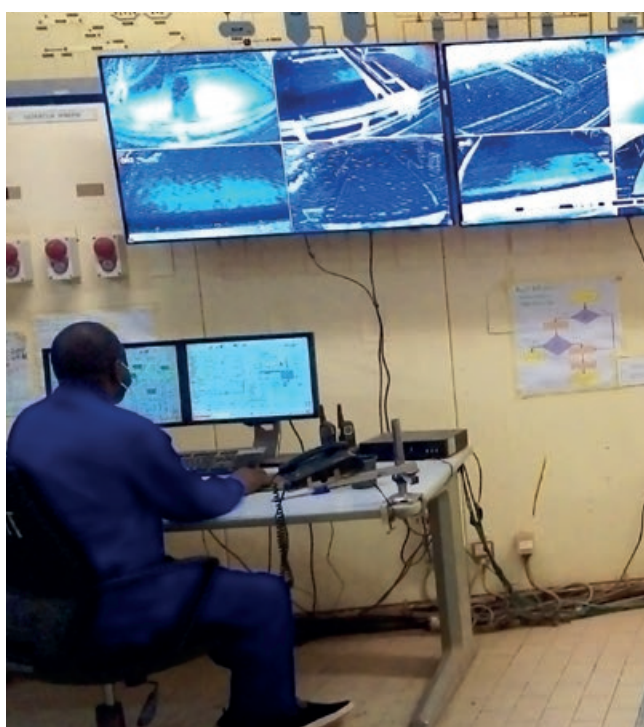


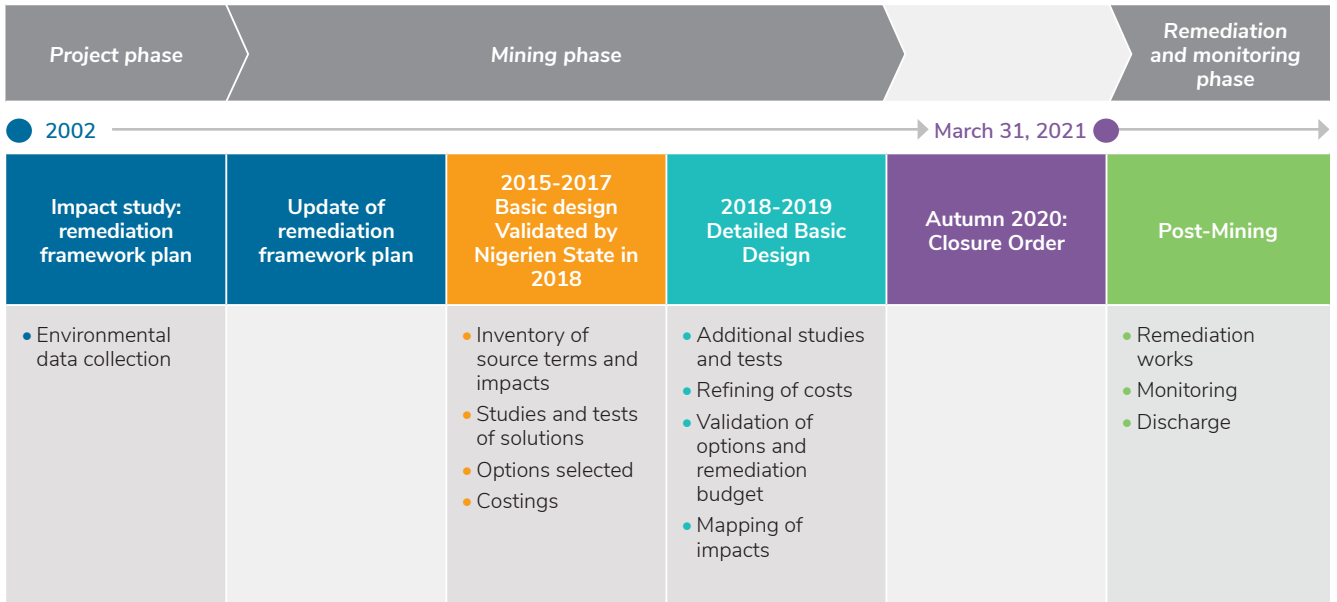
Mining site remediation and post-closure phases are an integral part of a mining project.

## Steps already completed

Studies for the remediation of the COMINAK site began in 2002 with the collection of environmental data to inform the closure planning process. The remediation plans have been regularly updated over the subsequent years to include the results of additional data and technical studies, in order to fully inform the possible closure options. To prepare for the end of our mining operations, a master remediation plan was drawn up between 2016 and 2017, initially in the form of a basic design summary. In 2019, this plan was fleshed out into a detailed basic design document to specify the technical, social and community options for the remediation project and the associated costs and implementation schedule.

At the request of COMINAK's shareholders, an independent expert carried out an audit of the Detailed Basic Design before its finalization. **The decree closing the operation of the COMINAK mine was signed by the Minister of Mines of Niger on October 15, 2020.**





## A dedicated team

The remediation project team includes technically trained site staff as well as remediation and project management experts from the Orano group.

Regular discussions take place with a Technical Committee appointed by Niger's Mining Ministry to monitor technical aspects and provide information on potential community-related goals or issues for the implementation of the remediation plan under the Detailed Basic Design.



### INTERNATIONAL BEST PRACTICES

To determine compliance with ICMM (International Council on Minings and Metals) standards, a gap analysis between ICMM remediation guidelines, which incorporate industry best practices, and the COMINAK remediation project was conducted in October 2019. This analysis helped define areas for improvement in the implementation and monitoring of the remediation project.

# GOVERNANCE

INTERNAL	MIXED (COMINAK + ADMINISTRATION)	ADMINISTRATIVE AND POLITICAL
<ul style="list-style-type: none"> <li>● Project team</li> <li>● External experts</li> <li>● Steering committee</li> </ul>	<ul style="list-style-type: none"> <li>● Technical committee</li> <li>● Stakeholders from among government, elected representatives, and civil society</li> </ul>	<ul style="list-style-type: none"> <li>● Orientation Committee</li> <li>● Ministry of Mining</li> <li>● National project follow-up Committee</li> </ul>

The mission of the Orientation Committee created under the auspices of the Prime Minister of Niger is to give guidance to the actors involved in order to ensure the success of the COMINAK closure process and the remediation of the site.

The Orientation Committee meets under the chairmanship of the Minister of State for the Presidency and the Minister of Mining, the principal Ministers of the State of Niger and representatives of the Agadez Region. The representatives of Orano in Niger and the Managing Directors of SOMAÏR and COMINAK are invited to attend the meetings of the Committee.

The Ministry of Mining has oversight of the mining sector and related statutory provisions and instruments; it validates applications and signs acts and authorizations at the various stages of the process; and it calls on other ministries in their areas of competence.

## 3 components of the remediation project



## Main challenges for closure and remediation are threefold:

- 1 Technical:** ensure lasting stability in terms of public health and safety, reduce as far as reasonably possible (ALARA principles) the residual impacts as well as the surface area of land subject to use restrictions after the remediation.
- 2 Employees:** minimize the social impact of the closure of production activities and ensure fair and equitable treatment of all employees.
- 3 Community:** take into consideration and minimize the impacts of the closure on the community by ensuring a sustainable transition, adapted to the needs of the local populations and in keeping with the company's scope of responsibility.

To meet these challenges, a remediation plan that includes technical, social and community components has been defined in the Detailed Basic Design study.





1

# Technical

ASPECTS





The technical component includes the remediation of all the source terms present at the site.

These mainly include underground-mine works, the mill and surface facilities, the tailings pile and the ponds.

The objective when carrying out all the work will be to leave a site that is **safe, healthy and non-polluting**. The remediation activities will be subject to thorough environmental monitoring, which will extend for several years after the closure.

<b>SAFE</b>	Eliminate the risk of physical accidents related to installations, quarries, ponds, and structures linking underground parts of the mine with the surface
<b>HEALTHY</b>	Make the site compliant with radiation protection regulations and eliminate the risks associated with chemical products and residues
<b>NON-POLLUTING</b>	Minimize the pollution footprint and ensure that neither the site nor waste may be a source of future pollution

The execution design studies necessary to prepare for the work will continue throughout 2021.

The remediation work began on April 1, 2021, with the remediation of the underground mining workings which will consist in partially dismantling the underground equipment and blocking off openings to the surface. An initial phase of

around 5 years will also include the remediation of the tailings pile by reprofiling and coverage, as well as complete dismantling of the mill and surface facilities.

The remediation of the effluent pools also starts in 2021 and will take about 11 years: this is scheduled for completion in 2032.

Environmental monitoring will continue after completion of the remediation work for a period of at least 5 years, at the end of which a review of the results will be carried out. The monitoring will be complemented by a monitoring of the flooding of the underground workings and by regular inspection of the remediation work, with particular attention in case of exceptional climatic events.

**More information on the different work packages in the document "COMINAK: Travaux de Reménagement" (available in French )**



## REMEDIATION PHASES

APRIL 1,  
2021



DECEMBER  
2032

## Funding of works

The work will be financed in part by a fund set up several years ago by COMINAK, part of whose annual production is "set aside" for remediation.

The arrangements for determining the additional funding required to fully implement the remediation plan are currently being finalized by the company's shareholders\*.



## MOBILIZATION OF SUBCONTRACTORS

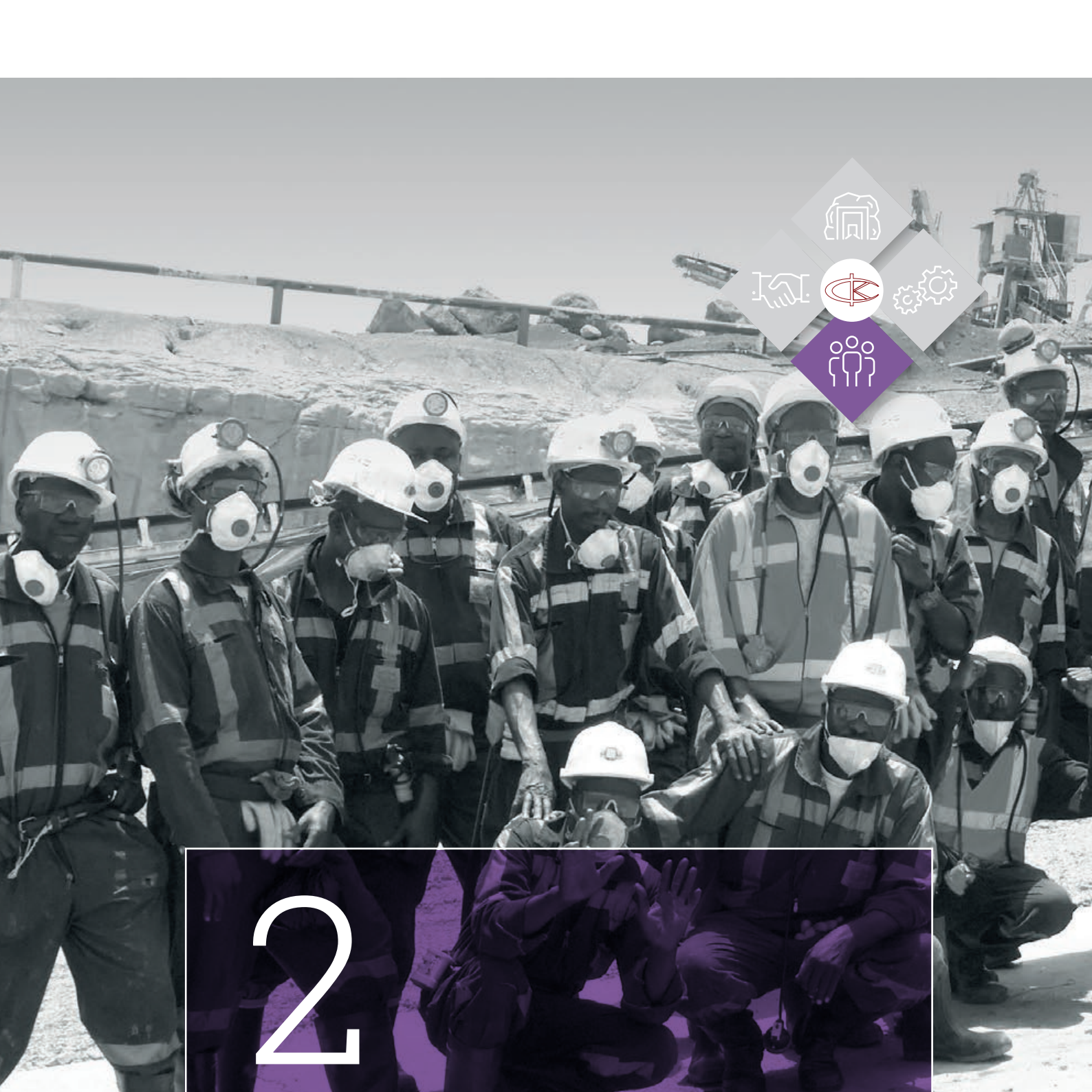
*COMINAK is developing a subcontracting policy that will allow a maximum number of local players to be involved in the execution of the work, in accordance with their capacity and expertise.*

### **SOCIAL INITIATIVE IN FAVOR OF SUBCONTRACTORS**

COMINAK has voluntarily engaged in societal action in favor of subcontracted employees, including training, support for entrepreneurship and a financial component. The financial section signed on April 21, 2021 relates to an end-of-work contribution

to employees of subcontracting companies under effective contract with COMINAK and present within their workforce, on permanent contracts as on December 31, 2020. The amount of this contribution is up to the rights legal dismissals owed by their employers. The quantified objectives having been defined, the conditions of access to training (driving license ; office software) as well as the methods of support of the subcontractors' entrepreneurship projects within the framework of the global program launched by COMINAK in December 2020 are under preparation.

\* Historical shareholder, Japanese company OURD, contributed 25% of the estimated costs of dismantling and transition upon buyback of its shareholding by Orano



2

# Employees

ASPECTS





COMINAK's social closure strategy is based on planning ahead for departures in order to minimize the social impact of the termination of production activities and, in so doing, guarantee fair and equitable treatment for all employees within a defined and formalized framework.

## Forward planning

Further to recognition of the depletion of recoverable reserves, COMINAK wished to plan ahead for management of the workforce as the site approached the end of its useful life and put in place a series of actions several years before the decision to shut down the site, to better manage the transition:

- Systematic analysis of every early retirement of a member of staff before taking any replacement decision
- Development of multitasking
- Outsourcing of certain missions under revised contractual terms

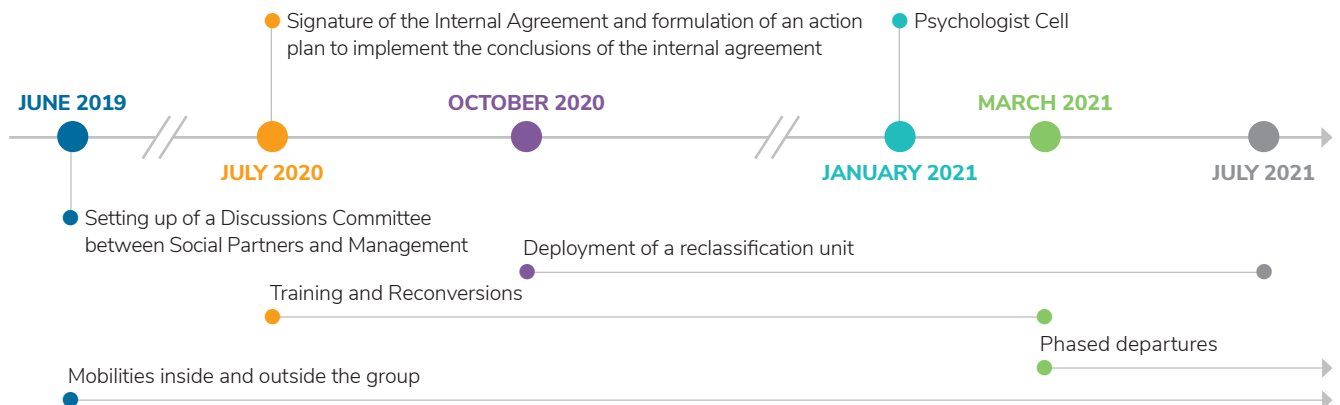
This forward planning approach has also concerned the management of subcontracting staff: up-skilling of personnel; placement of some of the most deserving staff; gradual reduction of headcount through a review of contracts taking into account the evolution of our activities, etc.

## A SUSTAINED AND ONGOING SOCIAL DIALOGUE

Well before the closure announcement by the Board of Directors, Management and Social Partners set up a discussion committee to prepare all the points covered by a memorandum of understanding addressing the redundancy plan.

COMINAK management undertook to engage in sustained and permanent dialogue with employees throughout this phase in the life of the mine.

A Social Plan Agreement was signed with representatives of staff and Niger Labor Administration on November 20, 2020.



# A Reclassification Unit

COMINAK has set up a framework for its employees that provides for additional internal and external redeployment measures in addition to the conventional, legal and regulatory provisions. This system is operational through a reclassification unit made up of dedicated HR professionals.

The different types of reclassification possible are as follows:

- **Age-related departures (retirement and early retirement)**
- **Professional reconversion through training**
  - internally on site: the support provided by the reclassification unit
- **Entrepreneurship**
  - Accompanying employees and subcontractors in eligible and viable entrepreneurial projects
- **Mobilities inside the group in Niger or elsewhere**
  - 50 mobilities operated as on March 31, 2021
- **Reclassification with local companies, in the sub-region and internationally**
  - Approaches with the Ministries of Mining, Petroleum and Employment to study placement opportunities in major industrial projects (pipeline, Kandaji Dam, etc.)
- **Maintaining part of the workforce to perform site remediation work**



## MESSAGE FROM MARIAMA MAYAKI

COMINAK HR Director

COMINAK employees have multiple skills in the fields of construction and public works, electricity, mechanics and industrial maintenance; skills that have been developed throughout their careers at COMINAK thanks in particular to the ambitious training and mentoring program. These skills will be a key enabler for the successful redeployment of our employees.

### Reconversion and Competencies development trainings (number of staff trained as on March 31, 2021)

**245**

Driving Licence for heavy goods vehicles & public transport

**40**

Driving public works machinery

**242**

Creation and management of businesses

**161**

Office equipment & software



## OSRA: POST-PROFESSIONAL MEDICAL MONITORING

The employee support agreement provides for the implementation of free post-professional medical follow-up within the framework of **OSRA** (the Health Observatory of the Region of Agadez).

OSRA was set up in 2012 in partnership between the Orano group, the mining companies, the State of Niger, associations of former miners and Nigerien civil society. All former employees of SOMAÏR, COMINAK and IMOURAREN SA exposed to ionizing radiation receive a free medical examination every 2 years. The objective is to ensure independent medical monitoring and to detect any pathologies related to exposure to radioactive ore. Out of more than 4,700 consultations carried out to date, no illness observed has been found to be related to this exposure.



## FOCUS

### Final blast at the COMINAK mine

Shortly before midnight on Thursday March 25, at 11:46 exactly, the last blasting was fired at the COMINAK. At dawn of Friday, March 26, the last team of miners came up from the bottom of the mine. They proceeded to the symbolic closure of the mine, the keys of which were handed over to the General Director. For the circumstance, the site alarm sounded for 47 seconds, to pay tribute to the 47 years of activity of this large underground mine. A commemorative stele was erected in homage to all the miners.

For **Moussa SOULEY**, General Director of COMINAK: « Thank you to all of you, history will remember that you marked this milestone with courage and dignity ».



« I have always had a great esteem for miners, a respect for the profession and a recognition for everything they have given over these long years. » said **Nafana MAYALDOU**, Prefect of Arlit Department.



For **Nicolas MAES**, CEO of Orano Mining: « From Akouta, you have had an impact on the planet. Your work has helped prevent the emission of 1 billion tonnes of CO<sub>2</sub> ».





# 3

## Community ASPECTS



## ENGAGEMENT WITH STAKEHOLDERS

The objective of the community component is to achieve a **long-term and sustainable social and economic transition to serve the interests of the local community**. To achieve this objective, it is essential that all stakeholders be involved.

## The challenges

Today, COMINAK is a major player in the economic life of the town of Akokan, supporting 650 employees and their families, subcontractors, and the induced trade. The closure will therefore have a significant economic impact on the town community.

The success of the social transition which will be taking place depends first of all on the handover of the infrastructure currently managed by COMINAK, while limiting the impact on the population.

- **Mining town:** The employees of the mine are housed free of charge and COMINAK provides them with free water, electricity and upkeep,
- **Health:** COMINAK built a hospital in Akokan in 1978. Medical care is free for employees, subcontractors and eligible beneficiaries, and outsiders also have access to it.



## Mapping of impacts

An initial official consultation of all local and national stakeholders in the remediation project took place in 2019. This was used to map the closure's societal impacts, classified by criticality.

### Between 50 and 70 stakeholders met

The socioeconomic transition plan stems from this mapping, with each action aimed at minimizing the identified impacts.

It was prepared in conjunction with the Ministries concerned (Mining, Environment, Town Planning, Health, Agriculture & Livestock, etc.), the administrative and traditional authorities, elected representatives, civil society and partners.





**The plan includes:**

- conditions of access to health care,
- conditions of access to water,
- management of urban infrastructure (of the town of Akokan) for wastewater and electricity,
- support for economic activity and economic reconversion, particularly through entrepreneurship and in the market gardening business, which is very present in the region.

The transition plan extends over **5 - 10 years depending on the action**, so that support can be tailored to the circumstance, and the transition can be as gradual as possible.

**HOSPITAL**

**Transfer of the COMINAK hospital to the State, buildings and equipment**

Signature of the Agreement with the Public Health Ministry of Niger on October 8, 2020:

- a gradual transfer over 5 years: natural decrease in the COMINAK medical staff and its replacement by the public medical staff
- 10-year financial support for the support for upkeep and maintenance budgets and utilities
- date of application of the agreement: July 1, 2021
- free healthcare maintained until January 1, 2022



**INFRASTRUCTURES**

**Transfer of the mining town infrastructure to the State (+1,400 buildings)**

- Signature of an agreement with the Ministry of Urban Planning and Housing on February 8, 2021
- Date of application of the agreement: July 1, 2021





### Transfer of the drinking water network (distribution network and drilling) to SEEN / SPEN

- Signature of the Agreement with SPEN on December 30, 2020
- Laying of connection pipes by COMINAK
- Technical support by COMINAK for 3 months
- COMINAK's financial contribution to the maintenance of the connections in induced city for 2 years
- Date of application of the agreement: July 31, 2021
- Three (3) wells will be made available to SPEN during 2 years

### Transfer of the electricity network to NIGELEC

- Discussions finalized and agreement awaiting signature (implementation date to be set)

## ENTREPRENEURSHIP

- **Beneficiaries:** COMINAK employees, subcontractors, suppliers and promoters of the departments of Arlit and Ifrouane
- **Terms:** Subcontracting at the Maison de l'Entreprise, firm specialized in training actions and support for assembly of business plans, search for financing.
- **Target:** Support for 50 projects

## VEGETABLES GROWING INDUSTRY

- Transfer of 3 existing drinking water wells equipped with solar pump (coverage of current needs)
- Support from the municipality of Arlit-Akokan when setting up a new project



## EDUCATION

- Maintenance of subsidies (payment for utilities) in the city's schools for 10 years
- Development of a scholarship project
- Maintenance of cultural and sports grants with a decreasing amount over 5 years



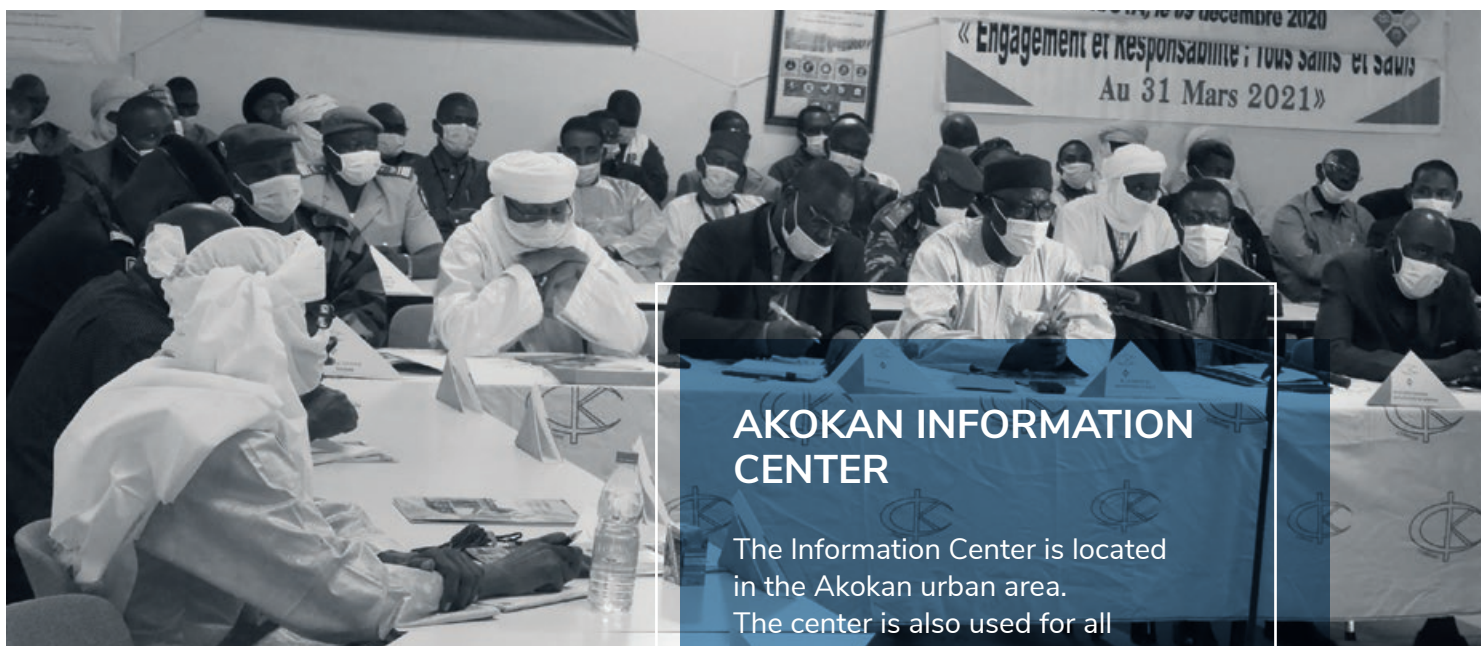
## BUSINESS CREATION ASSISTANCE PROGRAMME

COMINAK, through its partner *Maison de l'Entreprise*, a nationally recognized expert in the field, has launched a campaign to select viable entrepreneurial projects and help them come to life.

The projects will benefit from «technical» support from the *Maison de l'Entreprise*: help with developing the business plan, with company management, help with the application for the bank loan. Once the company is created, project leaders can be supported during the first two years of activity.

COMINAK supports the intervention of the *Maison de l'Entreprise* throughout the duration of the program.

# Communication and Transparency



## AKOKAN INFORMATION CENTER

The Information Center is located in the Akokan urban area. The center is also used for all COMINAK's community activities (meetings with representatives of the communities and other support to local residents). This center will remain operational throughout the mine remediation phase.

## Discussion workshops

Each project stage is supported by targeted communication actions. In 2020, several information and dialogue sessions with stakeholders were organized on site.

- an information and sharing workshop to discuss redevelopment options retained for the three components of the project
- a local information commission
- a meeting to present the remediation works to subcontractors

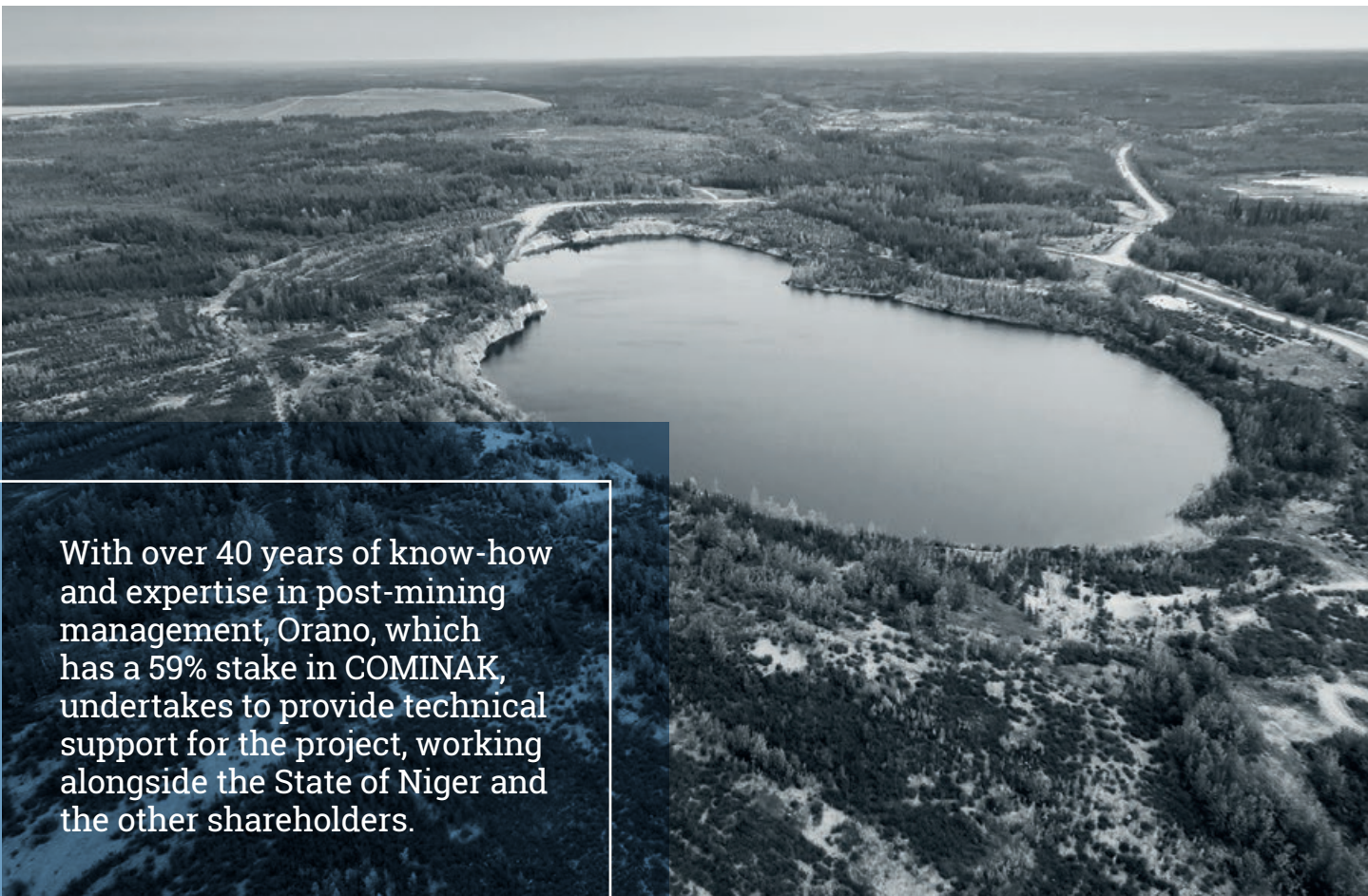
Site visits were organized on several occasions to allow the authorities representatives to follow the progress of the preparation works.



COMINAK remediation project has its own dedicated website:  
<https://www.orano.group/reamenagement-cominak>



# Orano, 40 years' experience in the conduct of remediation



With over 40 years of know-how and expertise in post-mining management, Orano, which has a 59% stake in COMINAK, undertakes to provide technical support for the project, working alongside the State of Niger and the other shareholders.

Cluff Lake, remediated mine site, Canada



Guided tour of the remediated Bosc mine site, France

COMINAK will ensure that this transition takes place in compliance with its operational standards and those of the Orano group in terms of safety, health and the environment.

Orano is working with the State of Niger on a business continuity plan in the north of the country, including in particular the continued operation of the SOMAÏR mining site and the development of the IMOURAREN project.

## MINES REMEDIATED BY ORANO AND ITS SUBSIDIARIES

- The **Cluff Lake** mine in Canada (in operation from 1980 to 2002)
- The **Mounana** mining site in Gabon (in operation from 1961 to 1999)
- **235 mining sites** in France (in operation from 1948 to 2001)



Remediated open pit mine, Le Puy de l'Âge, Limousin, France



Aerial view of the remediated Cluff Lake mine site, Canada



Processing plant at the Mounana mining site, Gabon



Aerial view of the remediated Mounana mining site, Gabon

## Our commitments

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### Information and Communication Center

Villa 223, cité Akokan-COMINAK

LL: 3223 ■ IP phone: (0033 1) 959758 ■ Cell: 00227 80002013

<https://www.orano.group/reamenagement-cominak>