

2018 ANNUAL REPORT



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His Majesty King Mohammed VI may God glorify him



See also

OCP Group – 2018 Sustainable Development Report > Complies with the recommendations of the Global Reporting Initiative (GRI)..

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#### 2018 **IN NUMBERS**



#### PHOSPHATE ROCK

Very good performance at mining sites with several absolute annual records set.

PRODUCTION\*

**EXPORTS** 

MARKET SHARE\*\*\*



#### PHOSPHORIC ACID

Strong growth in production of phosphoric acid that set a new record.

**PRODUCTION** 

 $Mt^{**} P_{7}O_{5}$ 

**EXPORTS** 

Mt\*\* P,O,

MARKET SHARE\*\*\*



#### PHOSPHATE FERTILIZERS

Increased production of fertilizer & feeds and diversification of the product portfolio with over 40 types of fertilizer.

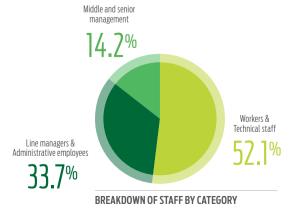
**PRODUCTION** 

**EXPORTS** 

Mt\*\*

MARKET SHARE\*\*\*

20,089 **FMPI OYFFS** 



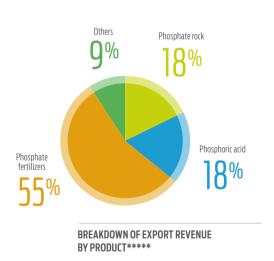
In 2018, OCP Group cemented its position as a market leader with its exports of all three segments: phosphate rock, phosphoric acid, and phosphate fertilizers.

<sup>\*</sup> Market output \*\* Mt: \* Million metric tons

<sup>\*\*\*</sup> IFA 2018, preliminary statistics, excluding purified technical grade acid from China. Percentages are based on trade volumes of P.O. limited to phosphate rock, phosphoric acid, and DAP/MAP/TSP (excluding NPKs).

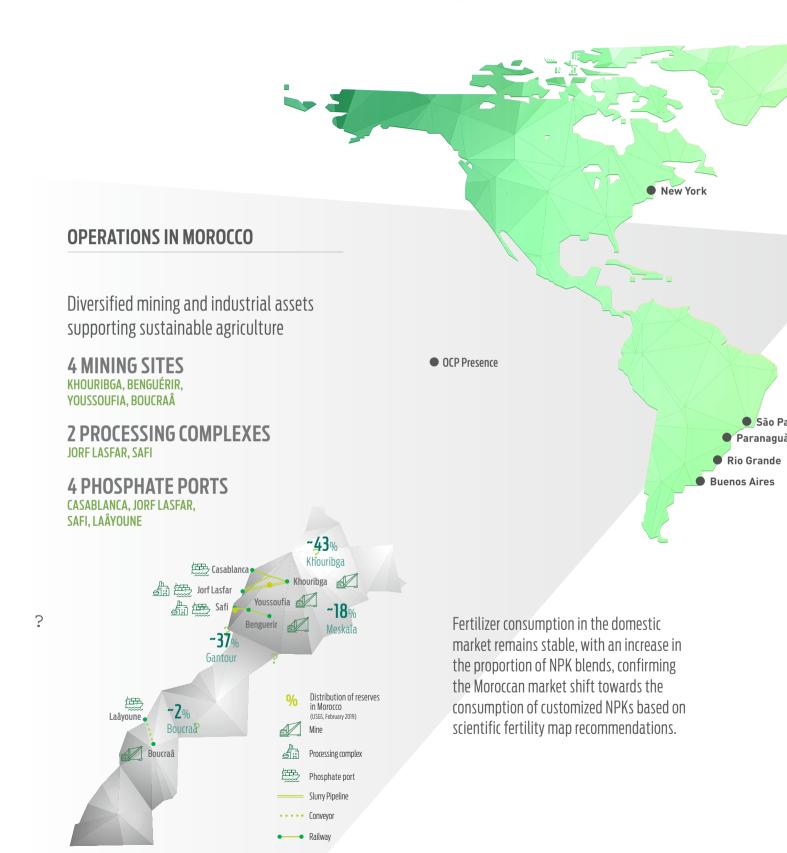
Favorable market conditions and strong earnings growth were supported by solid operating performance driven by enhanced capabilities and commercial agility.







#### A GLOBAL PRESENCE







There has been growth in fertilizer export volumes to North America, especially to the United States, as well as to Asia, particularly to India.



OCP phosphoric acid exports to Europe have risen, particularly to Turkey, while maintaining the same levels in Asia.



OCP has also continued to strengthen its leadership position in the raw phosphate segment, thanks in particular to heightened demand in Mexico and Brazil, and new market shares in Asia.



# Highlights of 2018

#### STRONG PARTNERSHIPS THAT SUPPORT OCP IN ITS COMMITMENTS

OCP Group is proactively committed to building strong and long-lasting relationships with a number of key partners. These alliances with leading national and international operators aim to enable OCP to achieve high performance levels and to effectively establish its strategy.



#### ACQUISITION OF 20% OF FERTINAGRO BIOTECH

By means of a capital increase, OCP acquired 20% of Fertinagro Biotech S.L. through one of its subsidiaries. This acquisition agreement, which is part of OCP's strategy to innovate and offer tailor-made fertilization solutions that meet the specific needs of farmers around the world, was concluded on October 23, 2018. At the same time, both partners signed an intellectual property and know-how licensing contract and a co-development contract. This alliance will greatly benefit from the partners' complementary capacities to identify new growth horizons.

#### HUBEI FORBON AND NEXT GENERATION FERTILIZERS

In an effort to develop a global partnership in the field of next generation fertilizers, OCP Group concluded a framework agreement on September 24, 2018 with the Hubei Forbon Group, a major Chinese contributor specializing in the supply of comprehensive fertilizer additive solutions. As part of the open innovation dynamic launched by OCP, this partnership accelerates its efforts to become the world leader in integrated solutions for agriculture. The alliance with Forbon reflects OCP's desire to strengthen its collaboration with leading international companies. This collaboration aims to build a network of contacts and experts in the Chinese agriculture and fertilizer sectors and provides an excellent opportunity to gain access to a world-class business ecosystem. The two partners are also planning to set up a Joint R&D Center in China.





#### FRAUNHOFER: A PARTNERSHIP TO PROMOTE GREEN RAW MATERIALS

OCP Group signed a memorandum of understanding on August 3, 2018, with the German Fraunhofer Institute for Microstructure of Materials and Systems to promote the use of green hydrogen and green ammonia as raw materials in the fertilizer industry. This agreement bolsters the partnership between OCP Group and Fraunhofer IMWS for the development of sustainable solutions for the fertilizer industry. It will allow the partners to strengthen their collaboration and join together to promote the use of raw materials identified as renewable. The focus is on two raw materials: green hydrogen (obtained through electrolysis from electricity produced from renewable energy sources) which can be transformed into many products for the fertilizer industry; and green ammonia (composed of green hydrogen and nitrogen) which can be used as a raw material for fertilizer production, among other things.





Before His Majesty King
Mohammed VI and the President
of Nigeria, a memorandum
of understanding was signed
between OCP S.A. and the Nigeria
Sovereign Investment Authority
(NSIA) on June 10, 2018, for the
development and implementation
of an industrial complex in Nigeria
for the production of ammonia and
related products.



Mt\* Ammonia



Mt\*

#### GLOBAL FEED TOLLING SERVICES FOR MCP 22.7%

Global Feed, a company in the Spanish Tervalis group specializing in animal nutrition, will now produce MCP 22.7. The toll processing services allocated to this entity have been started on the basis of a manufacturing contract since June, 2018. The raw material and the processed product, packaged and made available to the end customer, will remain OCP property from start to finish. The new Feeds product will allow OCP to penetrate existing MCP 22.7 markets and secure an additional source of profits. This new introduction is also part of the approach aimed at diversifying the specialty product offer in order to meet the expectations of increasingly demanding clients and to build their loyalty, but also to support and accompany OCP's downstream activities.



#### COSUMAR AND OCP COLLABORATE TO STIMULATE SUGAR CULTIVATION

In October 2018, OCP and Cosumar jointly launched a pilot project to produce tailored NPK fertilizers using Smart Blender technology. The project aims to provide fertilizer formulas adapted to sugar crops for farmers certified by Cosumar. Two regions hosted the pilot projects, namely Tadla and Gharb.



Soil analyses carried out

531 ha covered





#### AGREEMENT WITH AFRICARICE FOR IMPROVING RICE CULTIVATION

In November 2018, OCP, through its subsidiary OCP Africa, and AfricaRice, an agricultural research center that contributes to poverty reduction and food security in Africa through research, development and partnerships, signed an agreement to produce seeds of the most widely grown variety in Africa. They will be intended for sale, particularly to development agencies and governments, and will help to expand rice cultivation in their respective countries.



#### A PARTNERSHIP FOR THE FUTURE OF AFRICA BETWEEN THE OCP FOUNDATION AND UNESCO

An inaugural meeting of the Steering Committee for "Imagining Africa's Futures" was held at UM6P in Benguerir on June 21 and 22, 2018. This meeting followed the signing of the agreement between UNESCO and the OCP Foundation in October 2017, which sets the terms for financial support for the implementation of the three-year project "Imagining Africa's Futures" (IAF). It should be recalled that this intersectoral project aims to promote the capacity to "use the futures" and thus contribute to the positive social transformations taking place on the African continent. It also aims to strengthen foresight capacities through the deployment of creative centers and laboratories focused on learning-by-doing and responding to local, national and regional challenges.

#### **STRONG OPERATIONAL** PERFORMANCE

#### **NEW PRODUCTION RECORDS**

OCP Group has performed very well at its mining sites, setting several absolute annual records, bringing production to 37.6 million metric tons (dry, merchant-grade) in 2018. The scale-up at the Beni Amir and Sidi Chennane mines in Khouribga and the record yields achieved at Phosboucraâ were the main drivers of this performance, which also reflects the sites' efforts in terms of HSE excellence, maintenance, installation reliability and innovation. OCP's phosphoric acid production also increased significantly, setting a new record in 2018 with 6.1 million metric tons P<sub>2</sub>O<sub>5</sub>. This increase was supported by the scale-up of the JFC I. II and III industrial units and the launch of JFC IV at Jorf Lasfar. Finally, fertilizer & feed production exceeded 8.8 Mt in 2018 with a diversified portfolio offering different qualities of fertilizer.

37.6 Mt DMG\*

Rock extraction volumes

Volumes of phosphoric acid produced

Volumes of fertilizer produced

\*Drv. merchant-grade

\*\* Jorf Fertilizer Company I, II and III



#### **PURCHASING DIGITALIZATION AND** SIMPLIFICATION OF **PROCESSES**

In line with its Purchasing Transformation project, OCP has set up a digital platform dedicated to suppliers, over 1,600 of whom already use it, to increase transparency of the process from the call for tenders to payment, including contractualization and acceptance. It processes any claim related to the payment of suppliers, and this digitalization has already increased the teams' autonomy and empowerment. At the Jorf Lasfar pilot site, the lead time for processing purchasing files has been shortened to 50 days.

1,600+

"User" suppliers

#### **ENHANCED FLEXIBILITY** TO MANUFACTURE **DIFFERENT QUALITIES OF FERTILIZER**

OCP continued optimizing its product portfolio, which is increasingly oriented towards tailor-made formulas, beyond the standard DAP, MAP, TSP fertilizer range. It is now fully centered on client needs. The development of innovative finished products enabled the manufacture and export of over 40 formulas in 2018. OCP further enhanced the flexibility of production lines. In Jorf Lasfar, for example, each quality can be manufactured by at least three lines.

Fertilizer formulas



#### **DEVELOPMENT OF** PARTNERSHIPS WITHIN THE INDUSTRIAL ECOSYSTEM

Efforts to accelerate the development of the industrial ecosystem are bearing fruit with the signing of a new contract and the launch of a new flagship industrial unit. American partner Cummins will be setting up in Khouribga. The American company's 16th Master Rebuild Center will be the biggest Cummins engine overhaul and maintenance center in the region. In Jorf Lasfar, the Industrial Zone also hosts our partner ContiTech's conveyor belt system manufacturing plant, two key partners in the launch of the Quick Response Center, which is the third biggest pump repair unit in Africa, as well as a partner operating a plant manufacturing secondary materials for fertilizers. These partnerships in activity sectors that are less developed on a national scale attract foreign investments and lead to the adoption of world-class standards in their respective fields while improving operational performance and the potential for the transfer of technology and know-how.

#### Total ecosystem partnerships implemented to date



#### THE CONNECTED **FACTORY**

Digitization is present at every level of the industrial chain to create a truly connected factory. Several achievements in this area were recognized in 2018, from advanced analytics with the commissioning of forecasting and optimization models for bringing added value and intelligence to data, to advanced automation integrating productive technologies to improve the work environment and productivity. Three automation projects were launched in Khouribga and Benguerir (driverless trucks and bulldozers), as was the deployment of integrated control rooms for remote steering and real-time supervision of operations and maintenance activities at all mines. Finally, in terms of digital services, the year was marked by the implementation of performance management dashboards and the deployment of the Plant Information (PI) system. This real-time process control system allows control charts to be set up, process/quality analyses to be carried out on all industrial parameters, and maintenance of critical equipment and quality traceability to be monitored.

Forecasting & optimization models

New integrated control rooms

Mines covered by Fleet Management System

#### THE THREE DRIVERS OF INDUSTRIAL DIGITALIZATION





#### **ADVANCED AUTOMATION**

Implementation of autonomous systems, embedded intelligence and continuous learning (capitalization) based on analytics to extract maximum value (costs, capacity and flexibility)



Extracting value from data through analytics optimization and forecasting models







#### **DIGITAL SERVICES**









INDUSTRIAL DIGITAL

CYBERSECURITY PROGRAM

#### **STRONG SALES PERFORMANCE**

Through its ambitious investment program, OCP continues to increase its flexibility and operational excellence in a sustainable manner, while securing a leading position in all three segments of the value chain: phosphate rock, phosphoric acid and phosphate-based fertilizers.

#### **FAVORABLE** MARKET CONDITIONS

In 2018, OCP was able to benefit from favorable market conditions, in particular with higher phosphate fertilizer prices, combined with an advantageous product mix and cost control that positively impacted its profitability, despite the rise in sulfur prices. In this context, OCP's profits grew well, with a significant improvement in the main financial indicators, in line with the positive performance posted throughout the year. The Group has thus continued to strengthen its commercial agility thanks in particular to the major geographical diversification of its exports, while generating growing sales. Its strategy continues to bear fruit, especially as OCP gradually moves towards filling demands for fertilizers that are increasingly adapted to the needs of specific soils and crops, while maintaining its focus on innovation and a farmer-centered approach.



#### **OCP SALES INCREASE IN 2018**

OCP Group had a good sales performance in 2018 compared to the previous year. Sales volumes increased in all three seaments: phosphate rock, phosphoric acid and phosphate-based fertilizers. For fertilizers in particular, the growth in export volumes was mainly in the United States and India. In Africa. OCP maintains its position as the leading fertilizer exporter, with sales of 1.85 million metric tons in 2018, representing 64% of the market share.

PHOSPHATE ROCK Mt exported, +2%

PHOSPHORIC ACID Mt P<sub>2</sub>O<sub>5</sub> exported. +3%

PHOSPHATE-BASED FERTILIZERS 8.4 Mt exported, +2%

6 #Growing Circular - OCP Group



#### **LAUNCH OF** THE PHOSFEED BRAND

Phosfeed® recorded the best performance since the launch of the animal feed supplement product line, with a sales increase of 8% in 2018 compared to 2017, despite fierce competition from the Chinese and the Russians in several markets (US, Europe, Asia) and the arrival of new capacities on the market. OCP Group began marketing its new Phosfeed® brand in April, 2018. It is a line of feed supplements enriched with phosphorus and calcium that provide livestock and poultry with the nutrients essential for their growth. Although the product line has been available since 2013, a new strategy was deployed to improve its positioning in target markets, based on an innovative and inclusive approach focused on product quality and traceability. Through attentiveness to our clients' needs, everything has been redesigned in close cooperation with livestock breeders and distributors. Phosfeed® products are GMP+, HACCP and ISO 22000 certified and meet the highest quality standards to ensure optimal and balanced animal nutrition.



Change in total MCP and DCP sales by volume

#### A NEW STORAGE BRANCH **IN BRAZIL**

Through its subsidiary OCP Fertilizantes, OCP Group has opened a new storage branch in Mato Grosso, for a total of three branches operational in Brazil. The subsidiary optimizes logistics, which are important for cost control, and expands its presence throughout the Brazilian States to strengthen local contact with clients and meet the market and distributor network constraints.

### WIDE-RANGING LOCAL SERVICES

Within OCP Group, the farmer is seen as the ultimate agent of change, and is placed at the heart of the Group's strategy. To this end, OCP designs and deploys local measures in Morocco and on the continent that meet the specific needs of each farmer. These measures take the form of support based on several components, at once technical, scientific and practical.

#### LAUNCH OF THE AL MOUTMIR INITIATIVE

In September 2018, OCP Group launched "Al Moutmir," its new outreach initiative supporting all farmers: a multi-service initiative that reflects OCP's agricultural support and outreach offer for farmers. It is a three-pronged initiative: the scientific approach to ensure the offer's sustainability; the partnership approach to jointly develop solutions with and for the farming ecosystem; and the farmer as a real agent of change. The Al Moutmir model includes a variety of innovative services and solutions such a soil analysis offer, a demonstration program and a training and capacity building program. Al Moutmir also includes a digital and technological offer: @tmar and Agripédia to support as many farmers as possible; Smart Blender for a tailor-made and local NPK fertilizer offering; and multimedia channels to interact with farmers and young people in particular (Facebook, YouTube, call center, dedicated radio programs, etc.). The Al Moutmir initiative is carried out by over 60 young agronomists stationed in over 40 provinces who work with farmers daily, providing them with training, demonstrations, monitoring, and support.

#### AL MOUTMIR BENEFITS 10.000 FARMERS

Agile and integrated, the farmer-focused Al Moutmir initiative delivers OCP's support offering through farmer education on scientific research and innovation in the sector, the promotion of agricultural best practices, and building farmers' capacities. Al Moutmir allows farmers to benefit from the daily support of experts and agronomists, with assistance offered throughout the technical itinerary. As a result, it reached over 10,000 farmers during the 2018-2019 season.

2,000 Demonstration plots

500 Training courses

10,000 +



#### AGRIAGENT TO BETTER SERVE FARMERS

Agriagent, part of the Al Moutmir complete offering, is an integrated digital management software whose first version was launched in November 2018, enabling the management of agricultural consulting activities and farming operations. The software meets several objectives, ranging from training planning, demonstrations, and visits for monitoring operations throughout the technical itinerary, enriching the knowledge base through data collection, almost in real time.

#### PHOSBOUCRAA AGRICULTURAL CARAVAN STOPS AT ASSA

The 6thPhosboucraa Agricultural Caravan took place from April 3 to 5, 2018 and provided services to farmers and camel breeders from the province of Assa-7ag and the Guelmim-Oued Noun region. This stop focused on assistance, awareness-raising and training for over 350 small farmers and breeders in the camel industry. The Caravan provided comprehensive support for livestock farming operations and camel product processing. In addition, a new feature was introduced: master classes, led by Moroccan and international experts, were held for 65 breeders on April 3 and 4 on topics related to yield improvement and product development as means of increasing breeders' incomes. This year's highlight was the organization of a competition in partnership with the Ministry of Agriculture and Maritime Fisheries. the Province of Assa-Zag, the Chamber of Agriculture and the professional organizations of the Guelmim-Oued Noun Region, which led to the selection of the top camels in the region.

350
Participating livestock breeders

**65**Farmers enrolled in master classes





#### AGRIBOOSTER COMES TO GHANA

The Agribooster program for small farmers in Ghana was officially launched on June 6, 2018. Designed to increase farmers' yields from input supply to market linkages, Agribooster also aims to strengthen trade links and provide Ghanaian farmers with training on best agricultural practices. As part of this program, hybrid seeds, phytosanitary products and high-quality fertilizers will be distributed to farmers.

11,685

Beneficiary farmers



#### AGRICULTURAL SUPPORT WORKERS HELPING SMALL FARMERS

OCP's African subsidiary, OCP Africa, has launched an initiative to encourage the emergence of micro-businesses in the agricultural sector. Young selfemployed entrepreneurs are supported and trained to become small farmers' main point of contact, thus creating an essential link in the agricultural ecosystem that connects small farmers to the rest of the agricultural value chain. These agricultural support workers are involved in both the supply of inputs (fertilizers, seeds, plant protection, etc.) and of services (training, mechanization, off-take, etc.). The first pilot was conducted in 2018 on corn and rice crops in Ghana with 15 young agricultural support workers supported and over 3,500 beneficiary farmers. This new business model represents a real opportunity for the development of integrated private contributors that offer a wide choice of products and services needed by small farmers, while encouraging young people to join the labor market in the agricultural sector.

#### MEETING BRAZILIAN LIVESTOCK BREEDERS

OCP is supporting the Rally da Pecuaria for the first time, in close collaboration with local partner Heringer. It's an opportunity for multidisciplinary teams — agronomists, OCP do Brasil marketing analysts and head office employees — to meet Brazilian livestock breeders, see their issues first hand, and try to best meet their needs, in particular with the Phosactiv and Phosfeed product lines.

2,000

Producers and technicians reached



3,500 Beneficiary farmers

15

Young agricultural support workers

# AGRICULTURAL DEVELOPMENT PROGRAMS: A CONTINENT-WIDE CHALLENGE

OCP Group's contribution to the promotion of balanced fertilization is significant. Scientific research, agricultural demonstrations, soil fertility maps... OCP Group works on all fronts, alongside its partners. Since soil mapping has shown convincing results in terms of yields using regional formulas and scientific recommendations, OCP is pursuing the same approach to make a long-lasting impact on the adoption of agricultural best practices across the continent, using its agricultural expertise to help partner countries.



#### **SOIL FERTILITY MAPS**

OCP Foundation's international activities were enhanced in 2018 with the creation of fertility maps for partner countries such as Burkina Faso, Ethiopia, Guinea, Togo, Cameroon, and Rwanda. This support is based on equipment maintenance, soil analysis laboratory upgrades, soil mapping, and strengthening of partners' capacities. Objective: provide local farmers with sustainable technical and technological solutions to improve local crop yields.

#### SUSTAINABLE SOIL FERTILITY MANAGEMENT IN BANGLADESH

This project is in line with the OCP Foundation's efforts to improve farmers' yields in Bangladesh. In sum, the challenge came down to the sustainable management of soil fertility to improve farmers' yields as part of an integrated agricultural system that contributes to food and nutritional security and to the improvement of the rural populations' living conditions. Various measures have been put in place as part of this project, aimed in particular at strengthening farmers' capacities and processing yields.



Training courses
benefitting 2,058 farmers
and 368 small fertilizer
distributors

New technology packages tested

70 Demonstration plots

Nearly 345,000

Nearly

190
agronomy managers trained

27,650 farmers reached



#### **ONGOING CROP TRIALS** IN INDONESIA

In collaboration with the Indonesia Soil Research Institute (ISRI), the OCP Singapore team is continuing its support actions undertaken as part of the agricultural development program in Indonesia. In January 2018, two field initiatives were carried out, one in Lampung for corn and one in Jambi for palm oil. Objective: evaluate yield increase through the use of Moroccan reactive rock and find the optimal phosphate application ratio to increase yields. The results were convincing, in particular with a doubled yield for corn cultivation.

#### THE INTEGRATED APPROACH TO BIOSALINE AGRICULTURE IN **FOUM EL OUED**

The Foum El Oued project promoting an integrated approach to agricultural development, launched in 2015, was completed in December 2018. This project was implemented by the Phosboucraa Foundation in partnership with the Regional Directorate of Agriculture, the National Institute of Agricultural Research (INRA), the International Center for Biosaline Agriculture (ICBA), and the Halib Sakia El Hamra Cooperative. For the past three years, the Foum El Oued agricultural development project has aimed to eliminate a number of natural and technical constraints that negatively impact the region's crop yields due to soil and water salinity. The actions undertaken concerned not only technical support for small farmers and sustainable natural resource management practices but also

improvement of farmers' and their families' incomes and living conditions, particularly in terms of drinking water, entrepreneurship among rural young people, education, and health. With its many achievements, the project has made it possible to introduce new salt-tolerant crops, promote new technical practices, and train farmers in technical and management skills, but also to improve service to the community and provide support to small rural income-generating projects. The project also made it possible to conduct new agronomic tests and inaugurate a laboratory for the analysis of water, soil and plants at the INRA research station in Foum El Oued in 2017, and to promote a product that generates income for 30 rural women in the Foum El Oued municipality.





# A COMMITMENT TO COMMUNITIES AND THE BUSINESS ECOSYSTEM

OCP supports millions of farmers around the world so that they can sustainably improve their yields thanks to balanced fertilization, providing a multitude of offerings, services and solutions. But that's not all: OCP works as closely as possible with its neighboring communities through actions with strong social and societal impacts in the fields of health, education, culture, and more.

#### BENGUERIR SCHOOL OF EXCELLENCE: SECOND COHORT COMPLETES HIGHER EDUCATION PREPARATORY PROGRAM

The second class of the Classes Préparatoires aux Grandes Écoles (higher education preparatory classes) has obtained excellent results in the various competitions for admission to the Moroccan and French Grandes Écoles. The main objective of the School of Excellence is to train a scientific and technical elite representing the country's social diversity, with the goal of becoming a top school in Morocco and Africa.

Admitted to Grandes Écoles in Morocco and France

Admitted to Polytechnique





#### A SUCCESSFUL 1ST DAKHLA BUSINESS CHALLENGE

OCP, through the Phosboucraâ Foundation, provides ongoing support for socio-cultural development at the local level through targeted actions. Through personalized support, the Dakhla Learning Center provides consulting and information services to the program's young members in order to help them develop their projects. These young project leaders are thus able to expand their knowledge of business creation and development through access to both generic and thematic training. In addition, project leaders undertake to fulfill a series of professional meetings with the center's advisors, providing them with individualized support and enabling them to complete and present their business plan. It also makes it possible for them to establish their action plan to develop their own businesses.

#### LEARNING CENTERS AND SOCIAL INCLUSION OF WOMEN

In the aim of strengthening women's leadership, the Phosboucraâ Foundation initiated the Women Innovation Circle in 2016 at the Laâyoune Learning Center to provide a program that is 100% dedicated to women's inclusion. Reflecting the gender approach of the Learning Centers, this program focuses on the development of women's social and societal skills by providing diversified and targeted training. In 2018, the program's third year, two cohorts completed the Women Innovation Circle. 162 women attended courses on childcare. budget management, nutrition, citizenship, home health and safety, and digital literacy. In total, 299 women benefitted from the program.

#### ENTREPRENEURSHIP INITIATIVES FOR SOUTHERN COOPERATIVES

The Phosboucrâa Foundation established a new program in 2018 that focuses on strengthening cooperatives' capacities for yield and market access, in compliance with applicable norms and standards, and for better performance and income. The first edition of this program launched on July 27, 2018 in the Laayoune-Sakia El Hamra region and was aimed at agricultural cooperatives with a high participation rate. Of the 175 applications submitted, a committee of experts selected 64 agricultural cooperatives including 433 shareholder members to benefit from the Foundation's support over a two-year period. In 2019, beneficiaries will begin training for skills development, finalizing project sheets, and launching the activities agreed upon.



Agricultural cooperatives selected

#### SPONSORED PUBLIC SCHOOLS

The sponsored schools program implemented by the OCP Foundation between August and November, 2018 is an integrated educational offer based on a vision that takes into the school's environment into account and targets various stakeholders for a global impact on student success. The lines of action are presented according to a holistic approach whose core objective is student success. This program also covers infrastructure and equipment. teaching support, school life, social and community environment, and governance.

31 Sponsored schools

Beneficiaries of teacher training

skills, environment, reading and art, etc.)

50 + School-based activity groups created (life



#### A CANCER SCREENING CAMPAIGN IN THE SOUTHERN REGIONS

Starting in 2018, a major breast and cervical cancer screening campaign was launched in three provinces of the Southern Region. The first phase of this campaign, which reached Laayoune/Boujdour, Dakhla/ Aousserd and Essmara, benefited a great number of women, totaling 5,287 screened patients.



#### ACT4FARMERS FOR INCREASED LOCAL IMPACT

OCP employees mobilized in October 2018 as part of the Act4Farmers initiative to make the best use of their expertise in the agricultural sector. As part of this program, they were able to rely on the various tools developed as part of the Al Moutmir program. Objective: support cooperatives, young leaders and women to encourage and initiate new opportunities for regional agricultural development that create value and jobs. Act4Farmers is an initiative aimed at capitalizing on the Al Moutmir program's efforts by mobilizing OCP employees in the context of Act4Community through volunteering, to sustainably impact the development of the local ecosystems in Morocco outside of major cities.

#### THE UM6P RESEARCH CENTER IN LAAYOUNE IS BROUGHT INTO EXISTENCE

The first phase of the Foum El Oued Technology Cluster project began in 2018 with the construction of the six buildings housing the UM6P Research Center in Laayoune. The Foum El Oued Technology Cluster, a knowledge and hub, is coming into being. The objective of this technology cluster is to be a laboratory for research, experimentation, knowledge transfer, business ecosystem development, and capacity building in the Southern Regions. The covered, 5,000 m<sup>2</sup> Research Center includes three research units dedicated to biotechnology. renewable energies, water and the environment, as well as logistical and conference spaces. More than an innovative urban planning project, this first phase of the Technology Cluster project provides a first glimpse of the opportunities being created for Africa. The Center's research themes have been designed not only to respond to specific local circumstances but also to the challenges Africa is facing.







A Company that Creates Value

# STAYING ON COURSE THANKS TO OUR COMPETITIVE ADVANTAGES

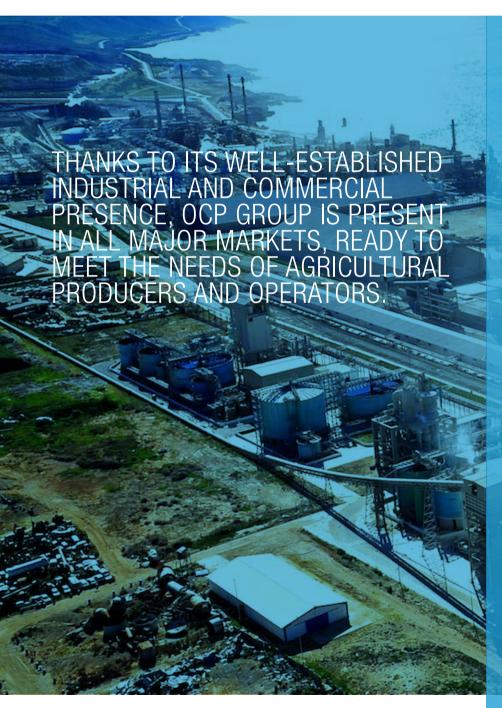


OCP Group offers a wide range of customized fertilizers to fortify soil and crops, which contribute to feeding a growing world population. OCP's strategy is geared towards value creation through vertical integration of its value chain and cost control, allowing margins to exceed industry levels. Access to the world's largest phosphate reserves combined with the Group's industrial assets, cost control. industrial flexibility and commercial agility provide OCP with competitive advantages and a unique positioning in all three segments: phosphate, phosphoric acid and phosphate-based fertilizers. To this end, OCP is pursuing an ambitious investment program between 2008 and 2030 with the delivery of the first wave of the program and some major achievements in 2017. The culmination of the various projects will transform OCP's activities and cement its leadership in the global fertilizer market.



A Company that Creates Value

#### EXTENDING OUR INTERNATIONAL REACH



This geographical coverage allows OCP to be close to its clients and farmers, facilitated by an integrated, agile supply chain that ensures product availability and follows market dynamics. This agility fosters market awareness and strategic opportunities. It allows OCP to adjust its product offering on an ongoing basis and adapt the volumes of ore, phosphoric acid and fertilizers produced according to market demand. In 2018, OCP continued to strengthen its commercial presence and to optimize its logistics activities for greater outreach and agility in key markets. This helps to strengthen relationships with clients and to ensure product availability throughout the year.



#### Breakdown of export revenue\*

16%

North America

18%

South America

160+ CLIENTS ALL OVER THE WORLD 20%

Europe

21%

∆frica

9%

Asia

14%

India

2%

Others

30.

Subsidiaries & Joint Ventures



A Company that Creates Value

# PUTTING THE FARMER AT THE CORE OF OUR STRATEGY



This requires better soil and crop yields, involving a best-in-class product offer based on science and R&D. It also promotes the implementation of innovative solutions that create new ecosystems and deliver agricultural best practices directly. OCP is committed to working hand in hand with farmers in the field on a daily basis through a wide range of offers, services and solutions: market supply, strengthening the capacities of farmers and their ecosystems, development and implementation of outreach devices aimed at promoting agricultural best practices and the transfer of theoretical and practical knowledge.



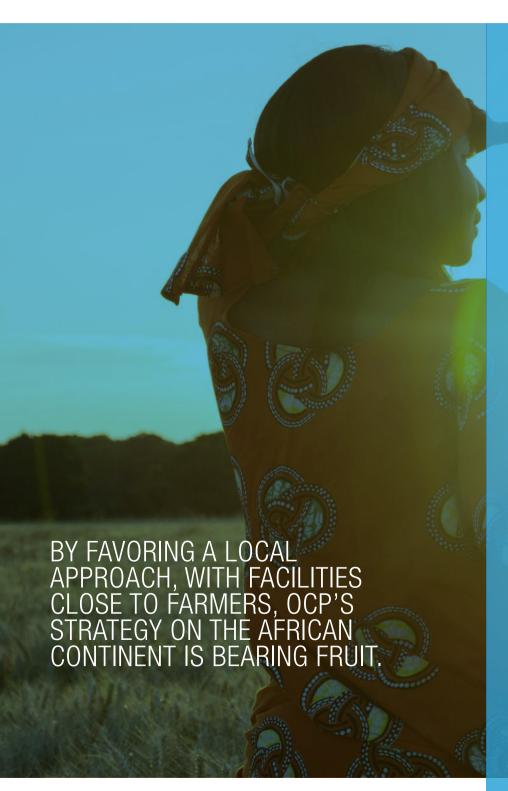
#### A focus on the farmer

- Ensure the availability of suitable, high-quality products
- Provide agronomic expertise for scientific recommendation of appropriate fertilizer formulas
- Develop innovative solutions to support the development of the agricultural ecosystem



A Company that Creates Value

### GOALS FOR AFRICA



OCP continues to strengthen its presence in Africa. Through its African subsidiary, OCP Africa, OC Group provides farmers with the resources they need to increase their yields and facilitate their access to the continent's consumer markets. This long-term commitment is based on a rich and diverse business ecosystem comprising many partners: local, pan-African and international. The success of this model has already enabled OCP to increase fertilizer sales with a balanced distribution across the continent. OCP continues to develop its African activities with renewed ambition. It is also investing in R&D, blazing new trails for sustainable agriculture. Through Mohammed VI Polytechnic University, OCP Group aims to be a bridge between Morocco, Africa and the world and has high expectations for the continent. In fact, the University intends to expand to 14 African countries and set up experimental research facilities in agriculture and applied research laboratories with partner universities, thus bolstering the innovation ecosystem for sustainable development on the continent.



ETHIOPIA, GHANA AND NIGERIA...
OCP GROUP'S AFRICAN PROJECTS
CONTINUE TO PROGRESS SMOOTHLY
AND WILL ENABLE THE GROUP TO
BOOST PHOSPHATE-BASED FERTILIZER
CONSUMPTION ON THE CONTINENT.

OCP plans to build fertilizer blending units in Rwanda, Nigeria, Côte d'Ivoire, Ethiopia and Ghana to ensure greater availability of tailored fertilizers to key African markets.



MOROCCO SENEGAL CÔTE D'IVOIRE GHANA BENIN NIGERIA CAMEROON RWANDA ETHIOPIA KENYA TANZANIA ZAMBIA BURKINA FASO A Company that Creates Value

### FOCUS ON SOLUTIONS FOR PLANT NUTRITION



OCP Group manufactures a wide variety of products, including several qualities of phosphate rock and over 40 customized fertilizer formulas. One of OCP Group's strategic priorities is to further optimize the product portfolio, especially the development of higher value-added specialty products, in order to take advantage of the ongoing progress brought about by crop variety improvement. The ultimate objective is to ensure an optimal supply of plant nutrients throughout the growth phases and to contribute to improving the nutritional quality of food. Balanced fertilization is increasingly connected to food quality issues rather than just to quantity. OCP intends to build on this momentum by innovating and developing new technologies that pave the way for more customized products.





#### **LOOKING TO THE FUTURE**



Fully aware of the importance of sustainable and intelligent agriculture, OCP aims to build on its company-wide innovation dynamic to develop and implement innovative solutions that meet the needs of the market and farmers by offering tailored and integrated solutions, increasingly customized fertilizer formulations and other phosphate-based products with very high added value. In addition, through specific innovation programs. OCP intends to seize the new business opportunities that product diversification can offer. Innovation is also reflected in programs linked to cost and capacity leadership throughout the value chain. The objective is to develop efficient production systems that derive value from digitalization and supply chain optimization while exploring new disruptive innovations and fully integrating the resulting principles and innovation programs in terms of sustainability and circular economy. OCP relies mainly on Mohammed VI Polytechnic University (UM6P) to carry its research and innovation agenda, as a preferred partner. Also in line with its Open Innovation model, OCP Group has formed a diversified innovation ecosystem through a collaborative approach with top-tier partners and multidisciplinary teams. It has also embarked on joint laboratories, mainly via UM6P, with renowned research centers and universities that are the best in their field.



+37%

of realized budget compared to 2017

16

programs divided into four strategic streams based on OCP's challenges: Farmer Solutions, Hacking Phosphate, Operations Efficiency and Sustainability & Circular Economy.\*

RESEARCH AND INNOVATION PROJECTS

150 ±

New strategic partnerships

ncluding

ndustrial partnerships and

Research centers and Universities

Integrated platform of 10 industrial pilot projects for the testing and development of new software and technologies.

Collaborative platform for participatory innovation (InnovOCP), supporting a dozen projects from the various challenge campaigns.

In 2018, OCP set up several strategic partnerships, in particular with Fertinagro, Fraunhofer, Forbon, École Polytechnique de Montréal, Massachusetts Institute of Technology and Arizona State University. These alliances reflect the Group's desire to combine its know-how with the expertise of leading contributors to develop more global and innovative solutions to meet its challenges and enable it to cement its leadership.



# OVERVIEW OF THE INVESTMENT PROGRAM UNTIL 2030





## **INFRASTRUCTURE**

LOGISTICAL CAPACITIES

New docks (1.5 km in length)

Rehabilitation and deepening of

Installation of new loading and unloading equipment

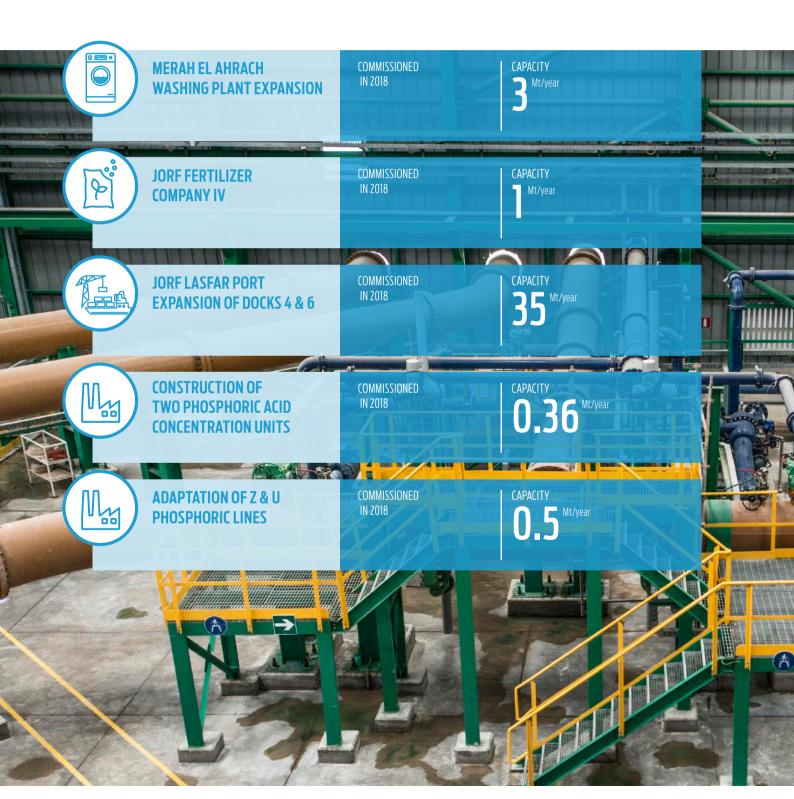
Construction of new docks

Installation of new loading/ unloading equipment

New port adapted to processing operations

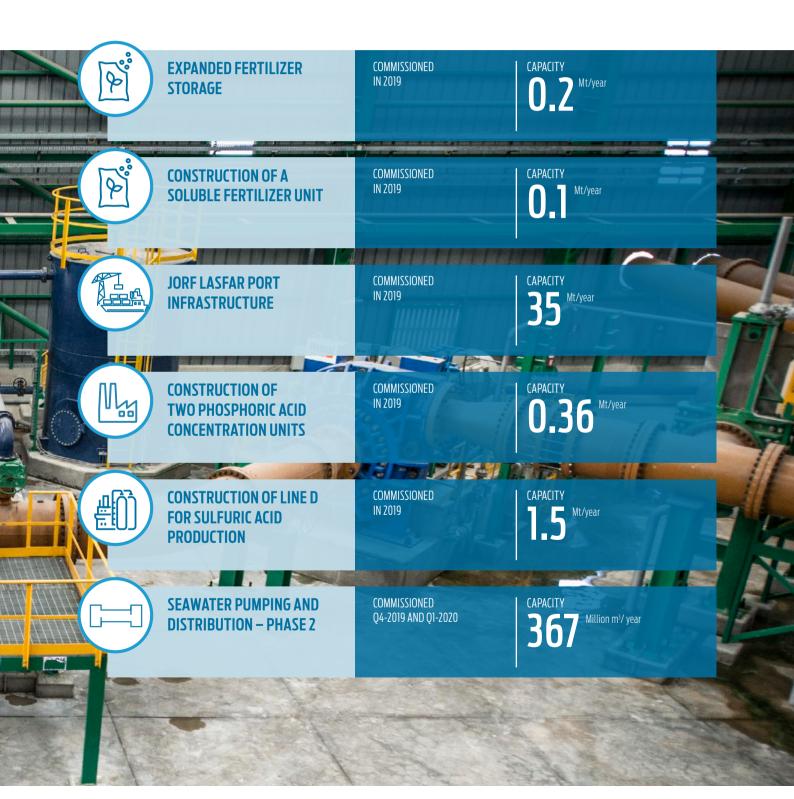


## MAIN ACHIEVEMENTS IN 2018

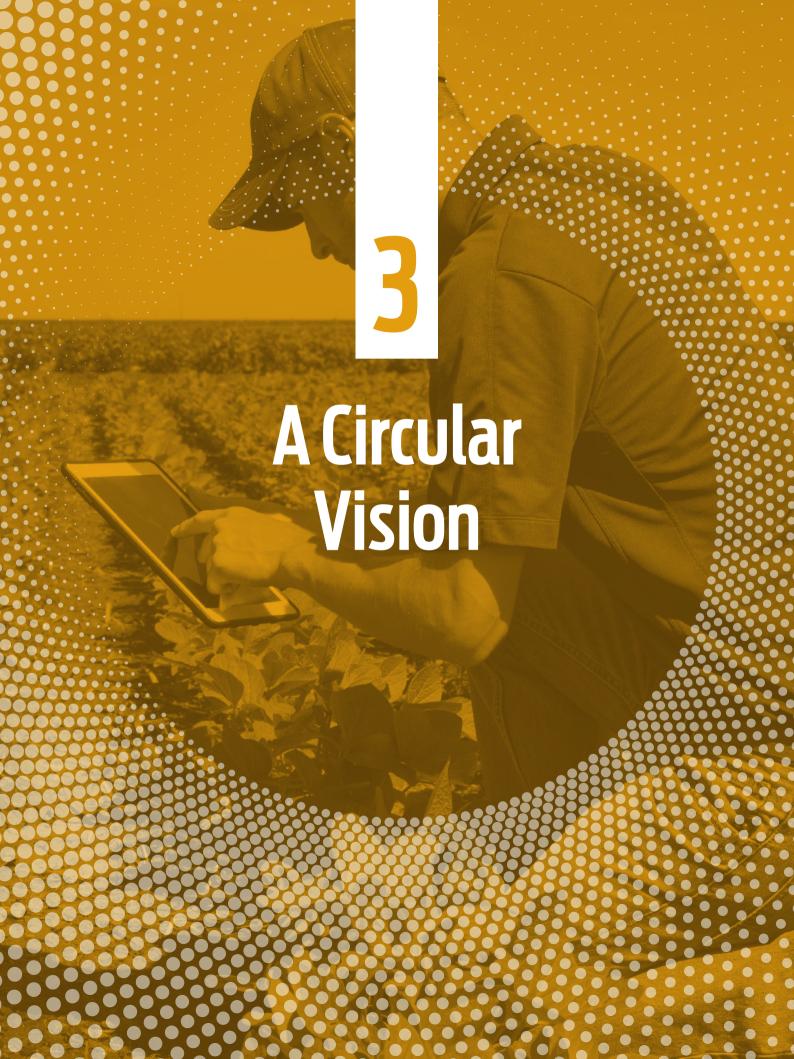




# FOCUS ON 2019 PROJECTS





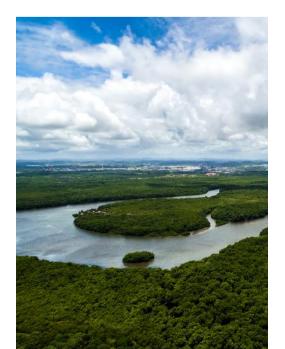


## RESOURCES FOR TOMORROW

Populations are exploding, increasing needs for resources while the world's reserves are becoming scarce. Access to essential resources is becoming more complex and a source of tension. Facing these changes, it is imperative to rethink the way we approach resources in order to move from a linear resource consumption logic to a circular logic of development and a service economy. A new model of economic and social development is emerging, and it is more efficient, sustainable and respectful of nature and communities. In response to these challenges, OCP puts its capacity for innovation at the service of the pursuit of progress. from agriculture to nutrition, involving natural and industrial ecosystems and local communities. With this in mind. OCP designs and deploys innovative solutions to preserve and renew resources, helping to create virtuous loops that create value in all its operations.

## A NEW CIRCULAR APPROACH

True to its goal of feeding the planet sustainably, OCP has always made an effort to develop initiatives and programs to manufacture efficiently and ecologically, in line with international industry best practices. Starting from the fact that the world consumes 1.7 times more resources than the earth produces. OCP Group has capitalized on all that has been done so far in sustainable development and has decided to develop a broader vision which will position this world leader in fertilizers as a leader of the circular economy. Based on this, OCP launched an inclusive Circular Economy program in 2018 to address the challenge of ensuring that its development is sustainable. This approach aims to create a symbiosis with the various ecosystems in order to create a new development dynamic where the consumption of earth's resources is more judicious.



## THE FOUNDATIONS OF THE VISION

OCP is fully aware of the environmental and sustainability challenges inherent in its mission. In light of this, OCP Group has always placed sustainable development at the heart of its strategy and has equipped itself with the means to act effectively and deploy these commitments at all levels. Based on a logic of continuous improvement, OCP's sustainable development policy translates into ambitious objectives that are constantly evolving to support growth and transform constraints into opportunities. OCP is also on the lookout for the latest practices and new concepts for responsible development that generates skills, good living conditions and community well-being. More than ever, OCP is anchoring its commitments in sustainability and revising its ambitions upwards.

Based on benchmark work on the different concepts and schools of thought such as the blue economy, industrial ecology, regenerative economy and even bio-mimicry, OCP Group chose the concept of circular economy as a guideline. In fact, it is a concept that includes all the others. The interconnected system of the circular economy is based on concepts such as a systemic approach, capacity for sustainable resource management innovation, governance, collaboration, value optimization, and cost reduction. Companies focus on the driving force of circularity in innovation and value creation. OCP Group adheres to it by rethinking its sustainable development model, which is essentially inspired by this resourcesaving approach, and revises its sustainable development ambitions upwards.

#### A concept that aims to imitate models, systems and elements of nature **CRADLE TO CRADLE** in order to solve complex

A concept that allows for thinking about the product upstream so that its

CONCEPT

## BLUE **ECONOMY**

An economy that uses the resources available in cascading systems.

### **PERFORMANCE ECONOMY**

on performance rather than the product.

## Circular

## **Economy**

**BIOMIMICRY** 

human problems.

## INDUSTRIAL **ECOLOGY**

An approach that encourages closed-loop production models based on natural ecosystems.

### **REGENERATIVE DESIGN**

Processes that restore, renew or revitalize their own source of energy and matter.

### **NATURAL CAPITALISM**

An approach that recognizes the critical dependence of companies and economies on natural capital.

OVERVIEW OF SCHOOLS OF THOUGHT RELATED TO THE CIRCULAR ECONOMY





## REVISING AMBITIONS UPWARDS...

In addition to enabling OCP to raise its ambitions, the new circular approach makes it possible to address the challenges OCP faces nationally and internationally, particularly in terms of economic development in the regions where it operates, and in terms of job creation, value creation, and more. Similarly, this new kind of vision gives renewed momentum and an even more important place to the type of innovation on which OCP has relied heavily and for which it has set up several structures, in particular within Mohammed VI Polytechnic University. As soon as the concept emerged, OCP Group seized the opportunity to take the new direction and adapt it to its context and specificities. From then on, it set up a multidimensional, four-pronged program based on resource preservation, sustainable production, balanced consumption, and transformation and recycling. Creating shared value and industrial symbiosis as well as respecting the natural ecosystem are some of the program's goals.

## **4 STRATEGIC AREAS**



## A COMMITMENT BASED ON MANY NEW GOALS



#### 1. CLEAN ELECTRICITY

All the electricity that OCP uses will eventually be produced by cogeneration or from renewable sources, such as wind, solar energy, etc.

This amount represents 25% of the country's clean energy production.



## 2. ZERO CONVENTIONAL WATER CONSUMPTION

All the water that OCP uses will eventually come from seawater desalination or the reuse of urban wastewater from cities surrounding OCP Group's various sites. This amount represents the freshwater consumption of nearly 4.8 million inhabitants.



## 3. REHABILITATED MINES FOR THE BENEFIT OF COMMUNITIES

Double the number of mined areas will be rehabilitated and redeveloped every year for the benefit of communities, eventually generating some 60,000 seasonal jobs and 2,000 permanent jobs.



## 4. THE LOWEST LEVEL OF EMISSIONS

The technological advances and innovative systems that OCP Group has adopted will make it possible to reduce its industrial emissions and waste to their lowest level, thereby meeting or even exceeding the most stringent global standards.



## 5. OPTIMIZED BENEFICIATION: ROCK CONTAINING ELEMENTS OTHER THAN PHOSPHORUS

Elements other than phosphorus present in the phosphate rock will be extracted and used.



## 6. ADOPTING SMART AGRICULTURE

OCP Group supports farmers by promoting the judicious use of fertilizers based on the principle of the right dose of nutritive elements, the right product, at the right time, and in the right place. OCP also develops tailor-made fertilizers and integrated and innovative solutions.



## 7. RECOVERING INDUSTRIAL WASTE

The industrial waste inevitably generated is recycled into high value-added resources.

## ALIGNED WITH THE SDGS

In recent years, OCP Group has been involved in the Millennium Development Goals on the fight against poverty and preserving water, energy, etc., to which it made major contributions. OCP is now fully committed to contributing to the UN's Sustainable Development Goals (SDGs) that link the fight against poverty with respect for the environment. These ambitious goals help to unite employees and give meaning to their actions, each at their own level. They also help to raise awareness among employees and stakeholders about OCP Group's role in sustainable development around the world. The time is ripe for OCP Group to align its strategy with these goals and make them the driving force behind multi-stakeholder cooperation. Many of OCP's actions are already in line with the SDGs: energy efficiency, wastewater reuse, mining rehabilitation, responsible production and consumption, capacity building for farmers, etc. For OCP, it is even more important to jointly build such initiatives with local partners and stakeholders, and to define new ones to go even further.



## SUSTAINABILITY AND RESOURCES

Note that 71% of global phosphate reserves known to date are located in Morocco\*. Working to exploit this wealth sustainably is not only a requirement, it is a responsibility that we have to our community. This is the driving force behind OCP's ambition. To enter the circular economy, OCP has defined a roadmap to identify projects that can efficiently transport phosphorus from the phosphate rock in the mine to the plant. Doing so requires an approach that favors operational and environmental excellence, the minimal use of resources, the use of renewable energy and non-conventional water sources, and sustainable procurement, and also one that has the minimum possible impact on the environment and preserves resources through co-product recovery and waste recycling. In the same vein, consumption must also be kept in check. This approach is also applied in the field through the use of fertilizers that are as customized as possible to specific soils and crops. Along with its public and institutional partners, OCP has contributed to developing fertility maps, first in Morocco and then across Africa. These help farmers use fertilizers in an optimal manner, while also providing them with access to theoretical and practical knowledge to raise awareness on soil needs and how essential soil is for their environment. Promoting agricultural best practices and encouraging smart agriculture, creating maximum value through waste recovery and the rehabilitation of exploited mines while creating employment and activities for the people: these are also part of the circular vision that OCP Group has adopted. The foundation of this resource-saving vision is developed in perfect symbiosis with the industries around us, thereby preserving the natural ecosystem and sharing the benefits with the people around us.





## Why did OCP decide to embark on the circular economy path?

I think that the future of the industry lies in the circular economy. The principles of sustainable development are important for the protection of human beings and the planet, but are also fully compatible with operational excellence and the pursuit of performance. Projects such as the Slurry Pipeline, heat recovery systems (HRS) and Sulfacid are examples of environmental performance going hand in hand with operational excellence. This is also the case for the preservation of phosphorus resources by exploiting poor layers (layer 3), investing in wastewater treatment plants, and optimizing specific input consumption. Finally, fertilizer customization, in addition to contributing to sustainable agriculture for healthy plants and soils, is also a matter of efficiency. The principles of the circular economy must be integrated from the very beginning of supply chain development. In short, the circular economy can be a real opportunity for the industry if these principles are made central to the production system.

#### The SDGs are particularly ambitious. How do you think OCP can contribute to these goals by 2030?

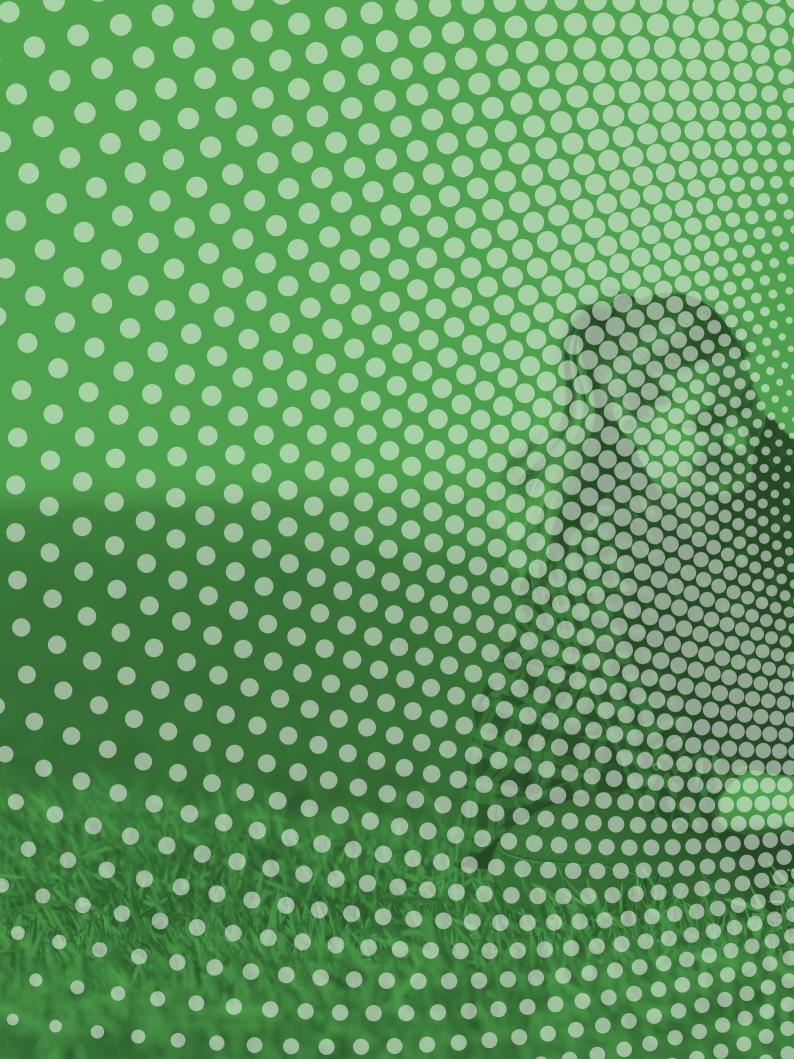
The SDGs are transformative goals. OCP is perfectly aligned with this sustainable and inclusive development approach. We already have a positive track record in terms of energy efficiency, optimization of water resources, rehabilitation of mining land, development of sustainable cities, and support for resilient agriculture. Today, OCP Group is setting new sustainability goals that make it a champion of the circular economy, for example by its actions to achieve electricity and water autonomy, among others. Obviously, it isn't always easy to quickly transform practices, and especially mindsets, but we will succeed.



An important advantage of the SDGs is that they provide a common reference framework for setting objectives and assessing the contribution to sustainable development in a language that everyone can understand.

## Which sustainability avenues do you think should be taken?

The circular economy vision that OCP Group has adopted to achieve its sustainable development goals clearly shows the avenue we wish to pursue at this time. This ambition to transition to a more circular development model cannot be achieved by one participant alone. It requires a systemic and inclusive approach that leverages the innovation capabilities of different partners throughout the supply chain. One thing is certain: an ecosystem-like approach is fundamental here. We are jointly planning our actions with our stakeholders.



# Preserving Resources

# RETHINKING USE MODELS



The use of natural resources is expected to double by 2050, adding to the pressure that the current economic model places on the land. Beyond just being aware, knowing this statistic pushes us to act and rethink resource use models to reconcile the ecological, economic, and social requirements that underpin the notion of sustainability and drive our interactions. With the world's largest phosphate reserves known to date being located in Morocco, which amount to nearly 50 billion metric tons according to the USGS, OCP Group has the great responsibility of preserving and protecting these mineral resources. In the face of growing tensions, we share the responsibility of preserving and protecting them with all public and private stakeholders.

## **MAKING BETTER USE OF RESOURCES TO PROMOTE ACCESSIBILITY**

Consuming less, using better: This is how OCP Group is working to develop innovative and sustainable solutions for controlled and ecological consumption, while respecting ecosystem balances in order to ensure the future accessibility and availability of resources. OCP is banking on its expertise in the phosphate and fertilizer industry to optimize the use of these resources, not waste any of them throughout their life cycles, and keep their impact in check both prior to and after their use in order to preserve natural environments. Phosphates in Morocco are sedimentary in nature, and phosphate qualities are classified according to their tricalcium phosphate content, also known as bone phosphate of lime (BPL). To preserve deposits and cope with deposit degradation, OCP Group has developed processes to enrich very low-grade phosphate levels, improve phosphate recovery rates and integrate deposits with very low levels of phosphate into its industrial development projects. This is done in particular through the reverse flotation process, which consists of floating carbonates and silicates and recovering phosphate with non-floating materials. This process, when used on an industrial scale, makes it possible to streamline the use of deposits and increase their useful life while producing new marketable phosphate grades with high added value. OCP Group decided to establish its Circular Economy Program because it understands the importance of preserving resources. It enables OCP to meet its sustainability challenges and adopt an approach that unifies its economic and industrial ecosystems, the goal being to succeed in creating a new development dynamic where the consumption of resources produced by the earth will be kept in check. A new model of economic and social development is emerging and it is more efficient, sustainable, and respectful of nature and communities. By preserving resources while reducing environmental impacts, OCP Group aims, in essence, to succeed in doing more and better with less.

To effectively respond to these challenges, OCP puts its capacity for innovation at the service of the pursuit of progress, from agriculture to nutrition, involving natural and industrial ecosystems and surrounding communities.

Through the Circular Economy Program, with a view to using resources efficiently, OCP is also exploring the possibility of recovering elements other than phosphorus contained in phosphate rock, in particular rare earth elements and fluorine. In addition, a program dedicated to developing co-products is an important part of the overall resource preservation roadmap.



## USE OF CO-PRODUCTS: A PROMISING INITIATIVE

By innovating and reinventing its processes, OCP turns challenges into opportunities by making it possible to create new resources, in particular through the development of co-products. The environmentally responsible management of co-products generated by extraction and processing activities is one of OCP's priority sustainable development projects. In the virtuous scheme of the circular economy, the way goods are consumed is designed to reproduce the cyclical way that natural ecosystems operate. Once consumed, each good results in co-products that can be reused in other production processes, creating an environmentally sound virtuous circle.

## FLUORINE TRANSFORMED INTO CaF<sub>2</sub>

Recovery involves recuperating and transforming the fluorinated gases, e.g. hydrogen fluoride (HF), generated during phosphoric acid production into synthetic calcium fluoride (CaF<sub>a</sub>) from fluosilicic acid. During processing, silica and hydrofluoric acid molecules are captured in absorption towers in a solution of fluosilicic acid that serves as a raw material for producing fluorinated products. Hydrofluoric acid absorption towers in industrial installations, in particular at JFC III located in Jorf Lasfar, make it possible to recover fluorine to produce fluosilicic acid, up to 30,000 metric tons per year, and transform it into CaF<sub>a</sub>. This technological prowess enables OCP Group to meet international standards.





## **A FUNDAMENTALLY ECO-RESPONSIBLE APPROACH**

OCP is putting an emphasis on methods for making use of phosphogypsum, a co-product generated during the production of phosphoric acid. Two of the most promising are the use of this product in road construction (backfill) and in agriculture (soil amendment). Phosphogypsum will also be used as a building material in the future. The possibility of converting phosphogypsum dihydrate to a hemihydrate also exists. Another solution is substituting phosphogypsum for natural gypsum in cement manufacturing. In addition, phosphate washing sludge, rich in mineral elements, has been tested as an additive in some agricultural applications.

## **PHOSPHOGYPSUM** TO BUILD ROADS

Pilot projects for phosphogypsum use have also been launched. The project for phosphogypsum use in road construction has made it possible to identify an alternative to traditional road construction materials, which are becoming increasingly rare in certain regions of Morocco. Conducted in partnership with various institutes and research centers, the first pilot projects made it possible to identify phosphogypsum-based mixtures and other products or by-products (cement, sand, waste rock, etc.) that meet mechanical and environmental road construction requirements. These mixtures, in which the percentage of phosphogypsum can reach 93%, are used as a replacement for materials in the capping layer, which plays an essential role in the payement structure. After the construction of the 1 km pilot project road section at the Safi site, another section was built using phosphogypsum with different characteristics at the Jorf Lasfar site. At this stage, the two pilot projects make it possible to conduct mechanical and environmental monitoring over a minimum period of two years. The next steps consist in optimizing the mixtures used, introducing new by-products generated by other industries with a view to industrial symbiosis, using these mixtures in base layers, and building a section of the national road network.



## **PHOSPHOGYPSUM** IN BUILDING **MATERIALS**

Other tests are also underway to identify mixtures that make it possible to use phosphogypsum in the building sector in compliance with mechanical and health standards. This project explores the possibility of recovering the co-product in its raw state by using it in building materials, in particular in red brick and cement manufacturing. The first results recorded during these pilot projects are positive.

## **PHOSPHOGYPSUM** IN AGRICULTURE

Other ways of using phosphogypsum are emerging, this time in agriculture. In Morocco, foremost, soils are generally increasingly affected by salinity, with increased vulnerability in irrigated areas. The problem is also a global one, with salinity affecting more than 100 countries and an area of nearly one billion hectares. Intensive practices, salinization, and loss of soil fertility are all pressures that impact agricultural productivity. Soil remediation requires new practices, such as manufacturing a phosphogypsum amendment, which provides calcium and sulfur and improves soil structure. Through its acidity, it helps make other calcium sources and other nutrients in the soil more soluble. providing a real advantage over natural gypsum. Phosphogypsum is therefore used as an amendment or fertilizer and is a solution to improve soil production and quality. Functioning as experimental demonstration plots. trials at Chaouia, Rhamna, and Fl Gara were conducted on several crops including barley, rapeseed, corn, and chickpeas, using doses of up to 40 t/ha as an amendment and 3 t/ha as a fertilizer. The encouraging results in terms of improved yields, nutrient sampling (P, N, S, Zn, Fe and Mn), and production per unit of water used have led to the launch of a program in partnership with the National Institute for Agricultural Research and Mohammed IV Polytechnic University in Benguerir. Tests will be conducted in Morocco in different regions and will serve to demonstrate the potential of phosphogypsum in agriculture.



5

# Sustainable Production



# PRODUCING EFFICIENTLY AND ECOLOGICALLY

OCP's ambition is to feed the planet sustainably. To this end, OCP Group is creating more and more initiatives and programs to produce in an efficient and environmentally friendly way, while remaining faithful to international best practices in the industry. Capitalizing on all that has been achieved so far, OCP aims to become a leader in the circular economy. Many promising sustainability initiatives will reinforce this position. Whether in mining or processing, OCP Group bases its operations on sustainable procurement and industrial ecology methods, while minimizing waste and the impact on the environment. This approach makes it possible to optimize the quantity of raw material used and facilitate the recovery of co-products and waste recycling and reuse, in particular. Beyond this environmental objective, OCP's eco-design approach encourages innovation and boosts OCP Group's competitiveness by making savings on purchases and gains in competitive advantages possible.

## OPERATIONAL EXCELLENCE: A MUST

While about 71% of the world's known phosphate reserves are in Morocco\*, exploiting this wealth sustainably is not just a requirement: it is a responsibility. In order to improve the circular nature of the economy, OCP Group has adopted a systemic approach that enables the most efficient production possible. Production is a fundamental part of OCP Group's industrial operations. It is driven by the OPS (OCP production system) and governed by a culture of operational excellence. Production aims to maintain a flexible and optimal production system that can be rapidly adapted to demand fluctuations and diversification in order to create value and stay ahead of the competition through sustainable operational excellence. In terms of sustainable production and operational excellence, OCP Group also ensures that its maintenance is structured and unified. with a view to professionalization and continuous improvement. In addition, OCP Group is working to develop a controlled OCP maintenance model based on reliability that could be recognized internationally. In this context, digital technology is a key part of OCP Group's strategy for developing innovative industrial practices. Digital industrial operation management tools must ensure superior operational performance, easy data management, and excellent control over activity management.

In all operational excellence projects, OCP Group applies an integrated approach that combines solutions to develop the organizational and technical capabilities required to optimize the performance of assets and industrial processes. Going even further in operational excellence by anchoring and integrating operational excellence at all levels while developing the maturity of the production system in a safe and sustainable way: This is the direction given to the new operational excellence program called "OPS 2.0."

**OPS 2.0** 

PRODUCTION SYSTEM **STAYING AHEAD OF THE CURVE** 

STRATEGIC POINTS FOR **OPERATIONAL EXCELLENCE** 

MANAGEMENT

**OPERATIONAL** 





# MEETING 100% OF ITS INDUSTRIAL ENERGY NEEDS WITH CLEAN ELECTRICITY

In the face of climate change, population growth, and the transition to renewable energy, OCP has made the strategic decision to choose energy efficiency and clean power provided by cogeneration and renewable energy. OCP has committed to supplying 100% of its industrial needs with clean electricity by 2030 to power its ambitious industrial development program. Doing so also contributes to the United Nations Sustainable Development Goals. OCP's efforts have been underway for a number of years through the implementation of high-performance solutions and innovative technology aimed at reducing its

carbon footprint. The company already supplies over 70% of its own energy and 40% of Morocco's clean energy (equivalent to 2 million metric tons of CO<sub>2</sub>) and intends to accelerate its innovative clean energy development efforts. In addition to continuing to improve energy efficiency and building an efficient cogeneration system, OCP has already begun to diversify its energy supply by increasingly using renewable energy. Phosboucraa. OCP's subsidiary based in the Southern Regions, as well as the Benguerir and Youssoufia mines, for example, supply 100% of their electricity needs through wind energy. The Jorf Lasfar and Safi sites have succeeded in achieving an energy balance thanks to the implementation of the process designed to recover the heat generated by the production of sulfuric acid, which is exothermic. OCP also systematically implements, within its major urban development projects (Mohammed VI Green City, for example), cutting-edge technologies in the field of renewable energy: wind turbines, photovoltaic plants, sun insulation systems, smart grids, electricity meters, economic street lighting, etc.

80%

of industrial processing needs met by cogeneration

65 MW

additional cogenerated at zero CO<sub>2</sub> emissions

More than

260 GWh

per year of wind energy made available (through PPAs\*) for the Gantour and Khouribga sites

100%

of the Benguerir, Youssoufia, and Phosboucraâ mining site needs met through wind energy

# RENEWABLE ENERGY: OCP IS EXPLORING THE "POWER-TO-X" AVENUE

Thanks to its many R&D and innovation projects, exploring new high-potential avenues and using so-called renewable raw materials in the fertilizer industry has now become a reality for OCP Group. This has been made possible through the development of innovative applications for solar energy and the use of new energy sources in OCP Group's industrial processes. The exploration of future sectors, in this case green hydrogen and green ammonia, is on the agenda. In 2018, OCP Group entered into a partnership with the Fraunhofer Institute for Microstructure of Materials and Systems based in Halle, Germany, which cemented their collaboration to develop a sustainable fertilizer industry. A new complex jointly developed by OCP, the Green Energy Park and Fraunhofer IMWS will be created to produce green ammonia. As the fertilizer industry is heavily dependent on imported ammonia as an input for phosphorus-based fertilizers, replacing these imports with green ammonia can increase local production capacity. Thanks to the potential in wind and solar energy, green ammonia could supply Morocco's sustainable fertilizer production needs and that of the international market in the long term. This represents a promising opportunity to capture a significant part of the market for Power-to-X technology to transform electricity into another energy carrier (heat for industrial needs, syngas for transportation uses, etc.). As an added bonus, exporting clean ammonia can reduce greenhouse gases by up to 95% by replacing conventional natural gas-based processes.

# ISO 14001 CERTIFICATION VERSION 2015: NATIONAL AND INTERNATIONAL RECOGNITION OF OUR EMS

In 2018, the Jorf Lasfar site's ISO 14001 certification was successfully extended through the migration of the entire complex to comply with the new 2015 version of this standard. This was achieved by digitalizing the system with a digital EMS and compliant monitoring software. The Safi site was also successfully migrated to the new 2015 version as part of the certification of its integrated management system (IMS). The same approach has been adopted for ISO 14001 certified entities in Khouribga (beneficiation and Port of Casablanca). The ISO 14001:2015 certification for all OCP Group operational sites is set to be obtained in 2020.



## Awards: IFA SHE Gold Medal awarded

OCP Group was awarded the Gold Medal for its HSE commitment at the International Fertilizer Association (IFA) Strategic Forum held in November 2018 in Beijing. This is an international award that recognizes OCP's efforts in recent years in the field of Health, Safety and Environment (HSE). Above all, it encourages OCP Group and its employees to go even further in this field, in line with best practices and global standards in this area.



# PLUM'AIR: AN ONLINE AIR QUALITY MONITORING SYSTEM

In 2018, the Jorf Lasfar site began operating a new version of the PLUM'AIR software, which enables real-time monitoring of ambient air quality and the work environment as well as forecasting and accident monitoring. This digital tool, which combines two internationally recognized mathematical models, displays all field measurements on the same interface. It covers more than 80 points inside and outside the site where air quality is continuously monitored in real time at 10-minute intervals and forecasted over the next 48 hours based on weather forecasts. The PLUM'AIR software has a wide range of very interesting features in terms of air quality control: comparison with standards, instant notification of all special events, scenario simulation, reporting, and history logs. More generally, the periodic monitoring and characterization of the quality of the surrounding environments (air, sea, groundwater) is another good systematic practice. In addition to automated monitoring of emission sources or air quality stations and periodic measurements of liquid effluents by online analysis tools, all sites have annual characterization programs of the surrounding receiving environments conducted by third parties, namely:

- Marine environment characterization campaigns on the coasts of processing sites;
- Ambient air quality characterization campaigns;
- Groundwater characterization campaigns



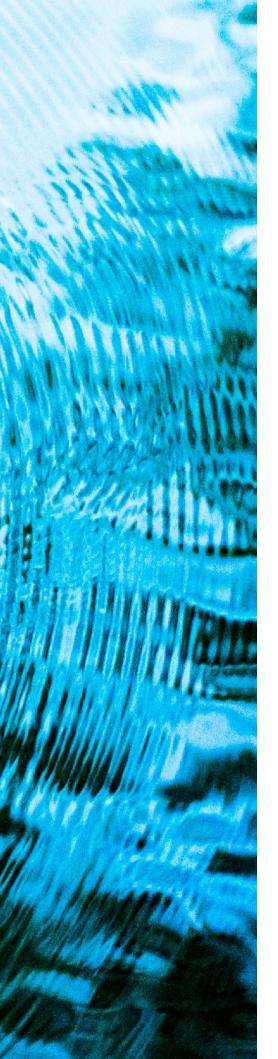


Once implemented, 100% of OCP Group's industrial water needs will be met by non-conventional water sources. 11

# THE WATER STRATEGY: COMBINING INDUSTRIAL DEVELOPMENT AND PRESERVATION OF WATER RESOURCES

As it is key to the production of phosphate fertilizers, water is a major sustainable development issue for OCP. It is used at each stage of OCP Group's value chain: from 62 million cubic meters in 2010, its water resource requirements will eventually exceed 160 million cubic meters annually. In order to guarantee integrated and sustainable water resource management, OCP Group has set up a water program based on two goals: optimizing water use throughout the value chain (mining, transport, development activities) and mobilizing non-conventional water resources (treated domestic wastewater and desalinated seawater).

More than MAD 3.5 billion have been invested in the Water Strategy since 2008 to satisfy current and future mining and industrial facility needs based on efficient water use. Once implemented, 100% of OCP Group's industrial water needs will be met by non-conventional water sources.



## SUSTAINABLE WATER USE THROUGHOUT THE PRODUCTION PROCESS

In 2008, OCP Group launched an ambitious industrial development program aimed at doubling its mining production capacity and tripling its processing capacity by 2030. With this industrial transformation strategy, which mobilizes MAD 200 million in investment, OCP Group is achieving prosperous and sustainable industrial growth.

To do this, OCP Group has developed a series of integrated complexes with lower levels of water consumption, in compliance with World Bank standards: -25% of untreated water and -40% of seawater. OCP is also committed to recovering and recycling more than 80% of the water used in enrichment processes, in a continuous system, through washing and flotation at its production site units. A washing sludge filtration project has been launched to increase this recovery percentage to 90%. OCP Group additionally conducts intensive R&D and innovation activities in this field. Many projects have been launched in collaboration with reputable partners in the field, including Mohammed VI Polytechnic University. in particular its International Water Research Institute (IWRI).

# THE SLURRY PIPELINE TO SAVE 3 MILLION CUBIC METERS OF WATER PER YEAR

The Slurry Pipeline, which conveys washed phosphate in the form of pulp from Khouribga to Jorf Lasfar, saves nearly 3 million cubic meters of water per year. This hydraulic mode of transport is particularly environmentally friendly: The pulp is transported by gravity while its moisture is preserved, and all the water used to transport it is reused in the phosphate processing installations. The Slurry Pipeline also makes OCP's environmental preservation and carbon footprint reduction approach a reality, as it use results in more than 930,000 metric tons of CO<sub>2</sub> avoided every year. In 2018, the figures recorded show nearly 1.3 million cubic meters of water saved and 400,000 metric tons of CO<sub>2</sub> emissions avoided.

## NON-CONVENTIONAL WATER SOURCES TO MEET OCP GROUP'S WATER NEEDS

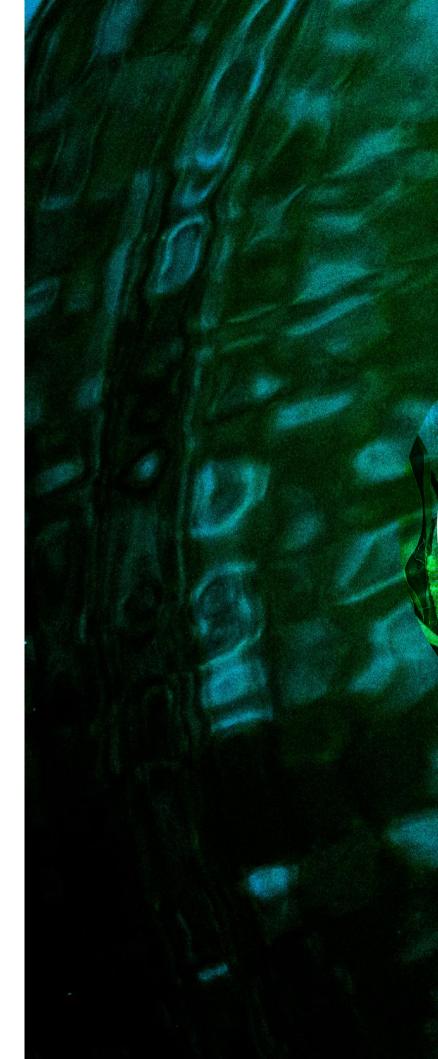
Today, more than 30% of OCP Group's industrial water needs are met by non-conventional water sources. The need for additional water inherent to a greater phosphate and fertilizer production was mostly met by the use of non-conventional water sources. A large part of the financing of the Water Strategy was provided through international loans granted by the Agence Française de Développement and the German bank KfW, which reflects the international community's confidence in this project.

# WASTEWATER TREATMENT PLANTS TO REUSE 10 MILLION CUBIC METERS OF WATER PER YEAR

OCP Group has implemented an ambitious program that aims to build many urban wastewater treatment plants to reuse wastewater for industrial applications. Three wastewater treatment plants were built as part of this program on the Khouribga, Benguerir, and Youssoufia mining sites. making it possible to purify and reuse nearly 10 million cubic meters of urban wastewater per year to wash phosphate and water green spaces. In addition, biogas recovered from the wastewater treatment process is used to generate electricity, covering up to 30% of the wastewater treatment plant's energy needs. Additional wastewater treatment plant projects are under study in other cities such as Kasba Tadla, Fguih Ben Saleh, and Safi.

# SEAWATER DESALINATION TO MEET ADDITIONAL WATER NEEDS

OCP Group is investing in seawater desalination to meet all the additional needs for its industrial development, without any reliance on conventional water resources. The Jorf Lasfar industrial complex is supplied by the largest desalination plant in Morocco with an annual capacity of 25 million cubic meters (record production of desalinated water reached in 2018 since its commissioning in 2016, or 26 million cubic meters). Its expansion project, scheduled to be commissioned in 2022, will reach a total capacity of 40 million cubic meters per year. Note that this station is designed to take advantage of the Jorf Lasfar complex's existing facilities and infrastructure, as well as the energy surplus that it generates. Another station, with a capacity of 7.5 million cubic meters, is planned in Laayoune to meet the water needs of the Phosboucraa site's industrial development program, in addition to the existing reverse osmosis desalination plant with a capacity of 1.2 million cubic meters commissioned in 2005.







#### The circular economy is a priority in OCP Group's development strategy. How is it applied at the operational level?

The circular economy is applied to our operations at many levels. Our plants produce sustainably by optimizing the use of resources. They also use renewable energy and water from nonconventional sources. Consistent efforts are made in our units to ensure that they have a minimum impact on the environment and avoid waste through the recovery of co-products and waste, among other things. However, these efforts cannot have the expected impact without the strong involvement of OCP Group's business ecosystem and local communities and true industrial symbiosis. This is why our Circular Economy Program extends beyond OCP to involve other parts of its business ecosystem. It even goes as far as the final consumers, as OCP ensures that beyond what we produce, they only use what is necessary, thus avoiding resource wastage.

#### Is this new concept limited to producing more sustainably?

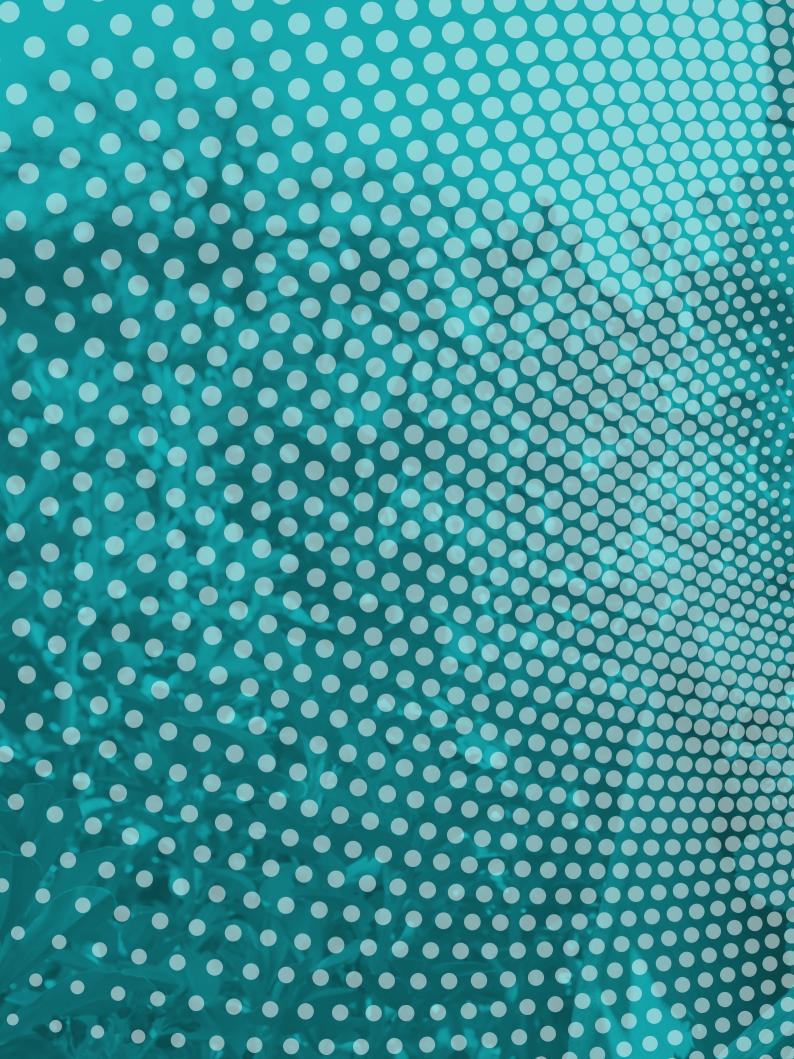
Actually, this is a new way of approaching production by applying a responsible and sustainable approach inspired by the natural ecosystem. At first, you might think that the circular economy is a concept that is essentially limited to recycling and waste management. Yet, it is much more than that: it is a logic of creating virtuous circles at all levels of the value chain. The approach is thus more comprehensive. It aims to dissociate economic growth from resource consumption. This not only requires using resources optimally, but also maintaining raw materials and manufactured products in a series of productive cycles as long as possible while minimizing waste, which is also recovered. In short, the circular economy aims to optimize the use of resources while generating much more added value.

#### Is it not more challenging to apply this logic to some resources rather than others, such as water, in this case, for which demand is growing on a global scale?

On a global scale and even more so on a national scale, water is a strategic resource that is central to many sustainable development objectives, such as combatting hunger, economic development, the preservation of ecosystems, and so forth, It is closely linked to climate change, agriculture. food security, and health. Certainly, the world's water needs are increasing, including in industry. However, the challenge lies precisely in optimized use and the search for alternative conservation. solutions. For example, reusing wastewater after treatment, desalinating seawater, and other methods could help to meet this challenge. These are avenues that we have been exploring for many years at OCP, especially in view of our ambition to considerably increase our industrial capacities, and the Circular Economy Program simply reinforces our commitment in this area. Today, we can see concrete achievements. We already meet 30% of our needs from non-conventional water sources, and our goal is to reach 100%.

#### What about energy efficiency? Does the circular economy approach address energy as a resource to be conserved?

Energy efficiency should probably be considered as a source of energy in its own right. In any case, this is how we see it at OCP. Adopting an energy efficiency approach throughout the value chain is indeed a priority that meets both cost reduction and sustainable development goals. This approach is part of an even more comprehensive energy management system, which OCP is working to implement and for which it intends to achieve ISO 50001 certification by 2021. That being said, the energy component in OCP's Circular Economy Program does not only deal with energy efficiency, but also with limiting CO<sub>a</sub>emissions. To do so, we advocate the development of clean energy, in particular through cogeneration and the use of renewable energy that does not emit carbon. To date, 70% of our needs are met from such clean energy sources, with the goal of reaching 100% in the near future.







# A NEW WAY OF CONSUMING IS NEEDED



Faced with the increasing scarcity of materials and the population explosion, strong pressures are being exerted, and the demand for energy, water, food, and agricultural land is increasing. This phenomenon requires innovation and a new way of thinking, working, and above all, consuming. OCP Group sees this disruptive environment as an opportunity, and it is already past this turning point. Agriculture is central to these challenges. As a world leader, OCP Group is committed to creating virtuous circles by recovering and reusing materials, water, energy, etc.

In terms of fertilization, OCP Group advocates responsible or judicious consumption. It does so by promoting sustainable and resilient agriculture among customers and farmers, providing them with products tailored to their needs that do not cause excess fertilization or pollution in the soil, and encouraging smart agriculture practices. The challenge is involving farmers so that they can take charge of their consumption and protect their environment. Sometimes new business models are created to decouple value creation from resource consumption. Such an approach is sustainable. OCP is taking the lead to meet this challenge and help farmers do the same.

## A MORE JUDICIOUS WAY OF CONSUMING

In the field, OCP encourages the use of fertilizers that are better adapted to soils and crops. To this end, it has drawn up soil fertility maps with public and institutional partners, which help farmers use fertilizers optimally. They also provide theoretical and practical lessons that raise awareness on the needs of their land and environment. OCP aims to promote and encourage balanced fertilization through this effort: It has positioned itself as a true pioneer in this field by supporting farmers and raising their awareness of best practices. It is also increasingly moving towards smart agriculture, which is the future for small farmers.

## FERTILITY MAPS TO BETTER UNDERSTAND THE SOIL

Today, OCP Group is at the forefront of innovative and smart agriculture in Morocco. A major initiative was launched in 2018 to address the challenge of customizing agricultural practices. This approach can serve as a springboard for sub-Saharan Africa: It requires, above all, a better knowledge of our soils. This is exactly the goal of the soil fertility map that OCP developed in partnership with the Ministry of Agriculture and a national consortium composed of the National Institute for Agricultural Research. Hassan II Agricultural and Veterinary Institute, and the National School of Agriculture of Meknes. Published in 2010, the Moroccan soil fertility map now provides a valuable database on soils, their characteristics, and the natural resources present in each geographical area. From the latest figures, 35,900 different soil samples were analyzed in Morocco. This project resulted in the development of 11 regional NPK-Blend formulas adapted to cereals, legumes, and olives. Small farmers boost their yields and gain in productivity with the advice and guidance they receive on judicious fertilizer use for their soil. In addition, OCP Group capitalizes on Moroccan expertise in the agricultural sector and supports partner countries through its OCP Foundation. This support aims to help in developing strategic decision-making tools for agricultural policies, in particular through the production of soil maps aimed at improving yields for the main agricultural sectors in partner countries. It involves strengthening the skills of partner country agricultural ministry teams and providing technical and technological solutions. It is also provided by raising farmers' awareness of the importance of soil analysis and sampling techniques through the mobile laboratories that are made available to them. In 2018, soil knowledge efforts were concentrated in Burkina Faso, Ethiopia, Rwanda Cameroon, Guinea, and Togo.

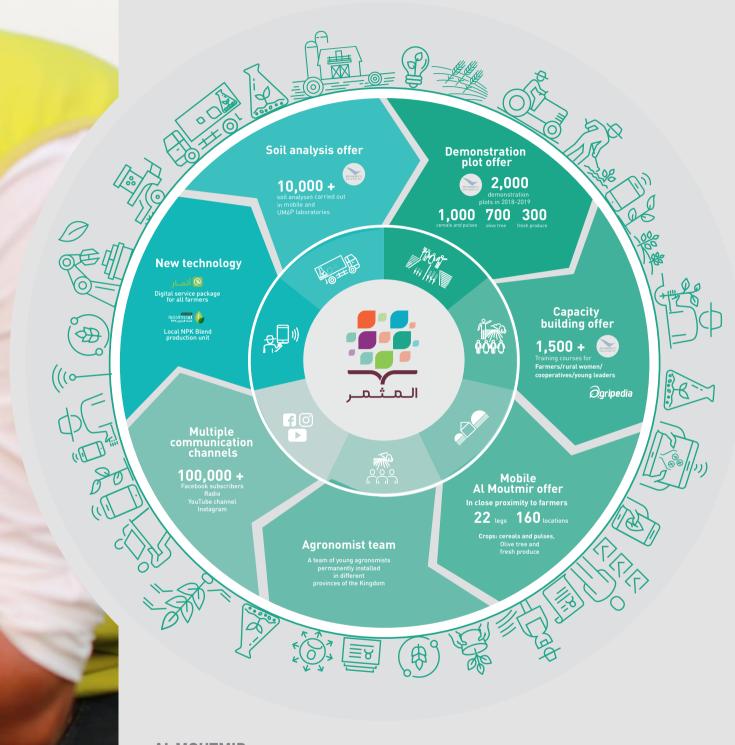
#### INCREASINGLY CUSTOMIZED FORMULAS

Soil fertility is central to food security, environmental protection, and profitable agricultural activity. Effective fertilization that is balanced in its dose/efficiency ratio and adapted to each type of crop contributes to preserving the land's nutritional quality and making the agricultural sector competitive and vigorous at the national and continental levels—two issues that are strongly linked. OCP Group focuses on innovation and the promotion of tailor-made plant and soil nutrition solutions for farmers to address them. Increasingly diversifying its portfolio with more suitable products and higher added value with 42 formulas offered to its customers, OCP is moving further towards custom fertilizer formulas, offered in a format much like an order book. OCP Group decided to take up the challenge of customizing for even more soil-friendly nutrients. Developing new agricultural products and solutions, exploring precision farming solutions, advancing research in this field, forging partnerships, training specialists, and providing innovative solutions to the global challenges of sustainability in agriculture and to the challenges facing the African continent are all part of OCP Group's strategy for flexibility and commercial agility. This is perfectly in line with OCP's circular approach based on judicious consumption.



## THE AL MOUTMIR INITIATIVE CONNECTS FARMERS

Committed to agricultural transformation, OCP launched a major initiative in September 2018 to bolster Moroccan agriculture. It involves a comprehensive and integrated multiservice offer based on a farmer-centered approach to better support and serve farmers that banks on the expertise developed in the field over the years. OCP intends to go even further to increase the potential of Moroccan agriculture through the contribution of science and a better knowledge of soil and crop needs, but also by taking into account the agricultural ecosystem's constraints and those of farmers. This is the logic behind the new integrated agricultural development program. Called "Al Moutmir," this integrated and agile initiative is threefold: the scientific approach to ensure the offer's sustainability; the partnership approach to develop jointly constructed solutions with and for the farming ecosystem; and the farmer as a real agent of change. The Al Moutmir offer includes a multitude of services and innovative solutions based on soil analyses made in our mobile laboratories and in UM6P laboratories, a training offer covering all crops on the technical itinerary, and demonstration plots used to support training on agricultural and technological best practices. The human factor, which is foundational to this initiative, makes all the difference: a large team of agronomists provide advice and share their knowledge and knowhow. Better still, they are permanently assigned to specific regions, for greater local engagement with farmers. The aim is to have agronomy experts provide small farmers with personalized support and daily assistance for everything from preparation ahead of the season to harvesting. The Al Moutmir initiative relies heavily on digital technology to support as many farmers as possible and better serve them. By diversifying their activities and using digital technology wisely, tomorrow's farmers have a major role to play in ensuring food, environmental, and energy transitions in their own communities. This dimension is bolstered by the circular economy approach that OCP Group has adopted.

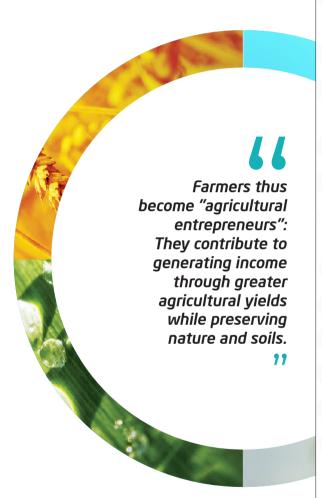


AL MOUTMIR:
A MULTI-SERVICE OFFER

# 3

## QUESTIONS FOR FATIHA CHARRADI

Vice President, Local Markets
- Farming Development
Executive Vice President, Sales



#### Does this new initiative require that the entire agricultural model be reinvented?

The intensive agricultural model has shown its limits from an economic, environmental, and social standpoint. Farmers have relatively low incomes; agricultural practices do not make it possible to harness the potential of Moroccan agriculture; young and old are increasingly leaving this activity, or they aren't even interested in it. Instead, it's time to capitalize on the evolution of Moroccan agriculture. We launched the Al Moutmir initiative in the last guarter of 2018 and took the time to listen to better understand small farmers' constraints. The majority are seeking information, advice. support, and so forth. The offer is designed to provide these. Those who are more informed are expressing the desire to take back control over their sustenance. Today, the agricultural world wants better production methods, and agronomic tools and techniques are improving in line with this. Together with our partners and value chain contributors, we are determined to support progress and this necessary transition.

#### Are farmers active in the development of their environment?

Small farmers work on their immediate environment to provide for their families. They can do so just as well by adopting sustainable production techniques that preserve the environment by including notions of soil life, biodiversity, etc. Raising awareness, supporting farmers from the preparation of their season to harvesting, promoting best practices, sharing knowledge, building capacity: This is what the integrated Al Moutmir offer includes to create more value and empower rural communities. Farmers thus become "agricultural entrepreneurs": They contribute to generating income through greater agricultural yields while preserving nature and soils. Finally, through their central position, they become the guarantors of many circular economy loops in terms of resource preservation, balanced consumption, waste recovery, and contribution to their communities. Women also play a predominant role in the agricultural ecosystem. It is often behind the scenes, so we don't see it. For us, women are an essential link in community socio-economic development, as is the youth population.



Is digital technology a driver behind this "new" agriculture?

Yes, OCP relies on digital technology that makes it possible to make fertilizer recommendations directly to farmers. It also uses new technologies to develop new products that are increasingly adapted to the needs of soils and crops. It is a digital tool that shortens distances and has a significant multiplying effect. Reaching a larger number of farmers, conveying knowledge, promoting agricultural practices, increasing soil knowledge for even more adapted products, going further in land management thanks to agronomic and scientific knowledge: This is the essence of the dynamic we are aiming for. Moroccan stakeholders are betting on this transition. It is now up to the entire business ecosystem to mobilize and train these future farmers.



## MOBILE SCHOOLS:

Through its subsidiary OCP Africa, OCP contributes to the development of modern and sustainable agriculture in Africa and the transition from subsistence farming to value-creating agriculture. OCP Africa is committed to providing African farmers with products tailored to their soils and crops while introducing them to best agricultural practices. The OCP School Labs provide farmers with different training courses, agronomic tests, soil analyses, and recommendations that help them use the fertilizers best suited to their type of farming. This includes 11 mobile soil laboratories that travel to remote areas to meet farmers conduct free soil analyses, and make recommendations for fertilizer use. Equipped with the latest modern technology like mid-infrared sensors (MIR) and X-ray technology, they provide almost instant soil fertility test results. More than 150,000 farmers have benefited from this program in Kenya, Nigeria, Ghana, Togo, Burkina Faso, Senegal, and Côte d'Ivoire. These actions help them increase their

### OCP SCHOOL LABS FOR GREATER OUTREACH TO FARMERS







160,000 farmers benefiting from the program



+11
mobile laboratories
in Africa



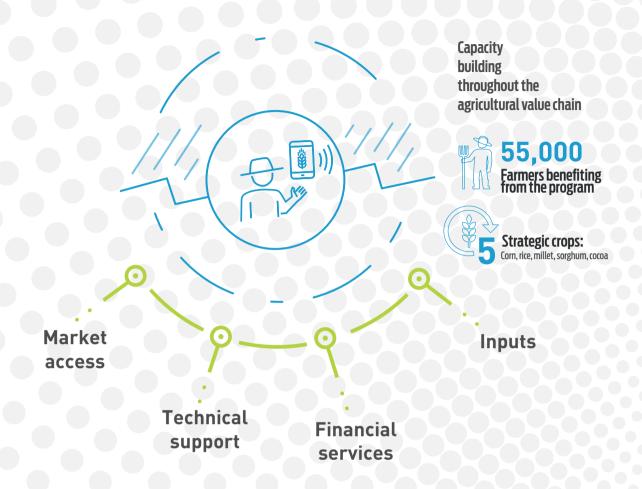
1,500+ villages visited



**5 strategic crops**Corn, cocoa, rice, tea, potato

#### **AGRIBOOSTER:**

#### A COMPLETE PACKAGE OF PRODUCTS AND SERVICES



#### TOWARD VIRTUOUS DEVELOPMENT MODELS: THE AGRIBOOSTER OFFER

Through its African subsidiary, OCP Group exports its support model for developing agricultural ecosystems. OCP seeks value creation opportunities that offer optimal benefits, strengthen local capacities, and increase opportunities and job creation. This approach creates an economically viable and sustainable virtuous circle that aims to help farmers increase their yields while ensuring they have opportunities to sell their crops. This is the purpose of OCP's initiatives. They don't just involve increasing yields, they help to ensure that farmers can process their crops to avoid losses. OCP's Agribooster offer is intended to be a complete solution that helps to

structure agricultural value chains. This program, currently being rolled out on the African continent, consists in offering a package of products and services to farmers, such as technical assistance, training, supply of inputs, financial and credit services, and access to the market for crop sales. Agribooster was launched in Ghana in 2018 and reached more than 10,000 farmers, bringing the total number of small farmers benefiting from the Agribooster offer to 55,000 at the end of 2018. The Agribooster program will be launched in Côte d'Ivoire, Nigeria, Ghana, and Senegal in 2019 to reach more than 140,000 farmers.

#### AGRIBOOSTER CONNECTS FARMERS TO THE REST OF THE AGRICULTURAL VALUE CHAIN

Improving yields is essential to transforming farmers' livelihoods around the world. Yet, many small farmers still lack the resources and services they need for agricultural processing. Farmers in remote areas aren't able to fully participate in their local economies. Resolutely committed to making agriculture and rural development more productive, more attractive to young people, and more sustainable. OCP is developing more initiatives that address the needs and challenges of the entire agricultural ecosystem. OCP believes that agricultural transformation requires the involvement of the entire agricultural value chain and is taking on this challenge by making farmers' access to markets more efficient, transparent, and competitive. A better connection between contributors has enormous potential to generate income. Many opportunities exist to attract young Africans to activities that improve farm yields and efficiency. The idea is to connect farmers to markets, especially urban and

regional markets. This is where Africa needs to reach its growing youth population and make the agricultural sector more attractive to them. OCP just launched an initiative through its African subsidiary to create micro-businesses in the agricultural sector. Youth involvement in agriculture needs to gain more ground. OCP Africa offers all kinds of opportunities to young people, especially for those willing to get involved in agriculture by becoming selfemployed agricultural support workers at different levels of the value chain. This could be by supplying agricultural inputs such as seeds, fertilizers, crop protection products, etc. or services such as training, mechanization, offtake agreements, and others. But that's not all. The program provides training to young people to strengthen the skills they need to set up and implement such projects. Young agricultural support workers also receive personalized support. This year, 3,500 farmers and 15 young agricultural support workers benefited from the program

### AGRICULTURAL SUPPORT WORKERS CONNECT FARMERS TO THE MARKET



# QUESTIONS FOR KARIM LOTFI SENHADJI

Executive Vice President, Africa and Chief Executive Officer, OCP Africa



OCP Africa's business model is perfectly suited to a sound consumption model and naturally aligns with the circular economy approach. Do you truly believe that this is the most appropriate way to set up sustainable agriculture for future generations?

OCP Group is active on all circular economy fronts simply because its strategy is focused on the long term and it realistically addresses its ecological footprint. We must collectively take adopt this new circular economy. We are active at every stage of the agricultural value chain with our partners, from raising farmer awareness to truly transforming our own business model to become a real agent of change. By doing so, we are helping in the fight against land degradation and water and air pollution, in the adaptation to climate change, and in the development of this jobcreating sector of the economy. Accordingly, our approach is designed to initiate a virtuous circle that promotes better access for farmers to tailored products, increases their agricultural yields, and helps them rise above just being farmers and turns them into agricultural entrepreneurs. We place farmers at the heart of all the solutions we design and roll out in the field, with the main goal of generating new business models in agriculture to make it more attractive to young people. To achieve this goal, OCP Group also banks on agronomy and R&D, thus promoting the implementation of innovative solutions and creating new business ecosystems that support farmers in their transition from subsistence farming to profitable and sustainable agriculture.

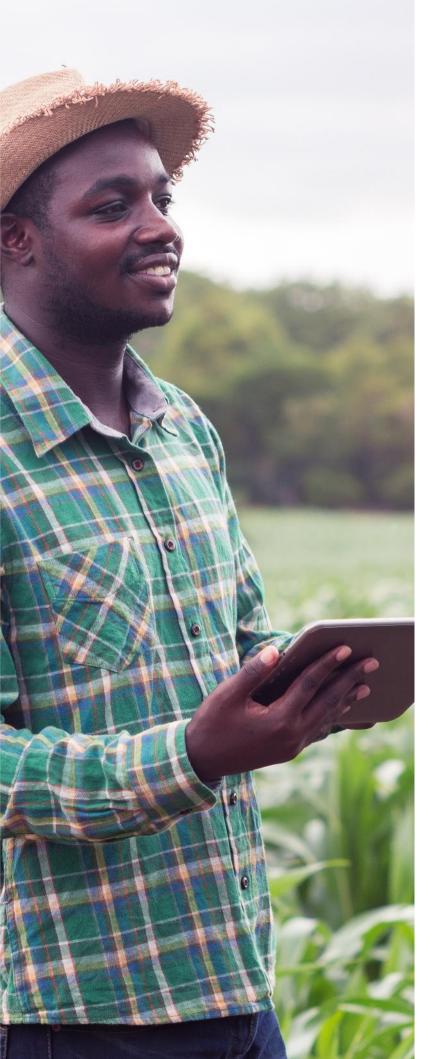
## Is OCP Africa the only entity investing in opportunities in Africa? Given that there are other participants active on the continent, the competition must be fierce, am I right?

Of course, but OCP never works alone. Our entire approach is fueled by the desire to participate in developing the agricultural ecosystem. This is why we operate throughout the value chain in partnership with industry leaders to launch innovative agricultural development programs that will accelerate the transformation of agriculture across the continent. All the support work that we do makes it possible to build solid partnerships that obviously result in commercial transactions and constructive long-term collaboration with the value chain's key contributors. In addition, our proximity to African markets gives us a competitive edge in terms of transportation, chartering, and logistics, which affects our sales prices, which are already considered the most competitive on the continent.



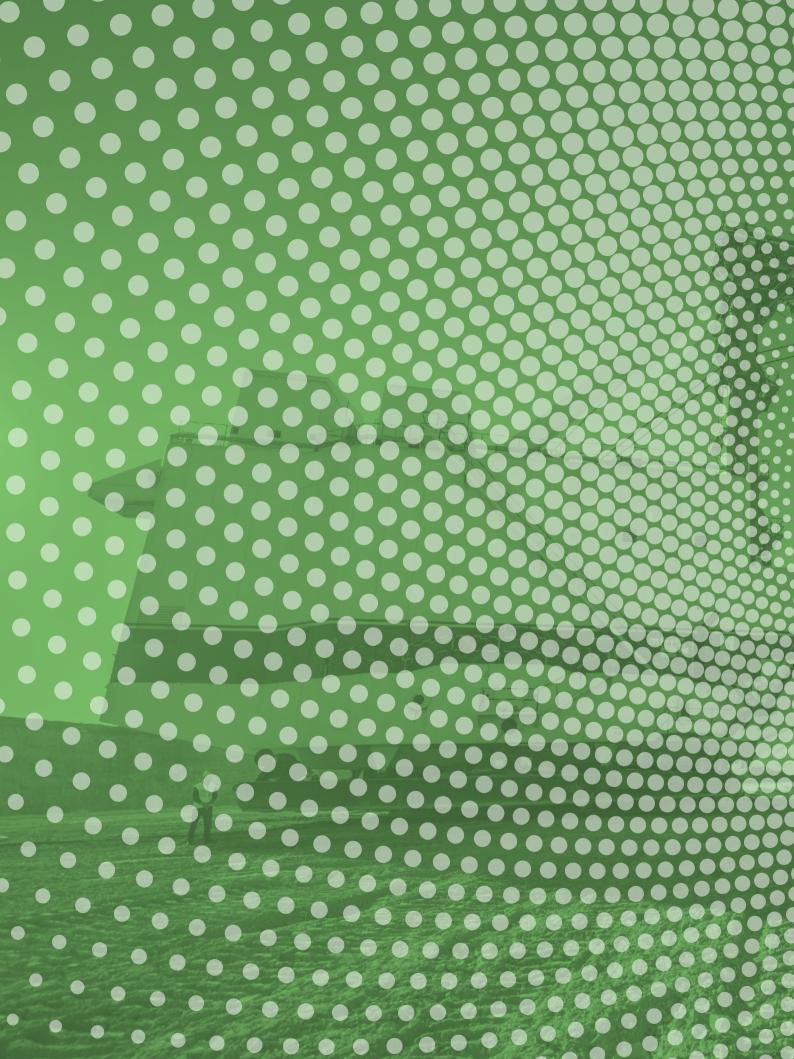
### Why create new links in the agricultural value chain? Doesn't doing so increase the number of intermediaries?

Every growing season, farmers face the same challenge: getting enough of the inputs they need at the right time, at a reasonable distance from their fields, and at affordable prices. They rarely have the means or credit to buy inputs. After the harvest, they struggle to sell their products for a profit. They aren't organized and they don't have the capacity to store their harvests. They are often forced to sell their products to the first buver at a market price that isn't always fair. Even agricultural processing options that would add value to their products are out of their reach. The idea lies in facilitating market access by offering integrated input and financial service packages to farmers and connecting them to agricultural aggregators, buyers, and processors. We help farmers be better organized and strengthen their bargaining power to effectively link them to markets, thus ensuring a virtuous circle that improves their yields and incomes. These new agricultural development frameworks make it possible for OCP to generate employment opportunities for young people who will play a vital role in ensuring this link between small farmers and key participants in the agricultural value chain. We are taking action in two areas: agriculture and employment. We are also banking on the catalytic effect of digital technology to transform tomorrow's agriculture and open new borders where access is still limited for small farmers.



#### **TOWARD SMART AGRICULTURE**

Agriculture has always benefited from technological progress. It's now digital technology's turn to make it's way to farms to improve practices and yields. Connected objects and Big Data are paving the way for precision agriculture that can better anticipate climate disruptions and make better use of natural resources. OCP is exploring digital solutions to develop smart and efficient agriculture, which is essential to the planet's future. The idea is to offer innovative solutions that address the needs of farmers and markets alike by providing tailor-made fertilizers that are both efficient and environmentally friendly. OCP's efforts to develop precision agronomy are part of its farmer-focused policy to help farmers improve the quality and yield of their crops. With this in mind, OCP decided to invest in R&D for farmer solutions that involve smart fertilizers or biostimulants. This is the goal of the new business unit, which will be dedicated to exploring the new so-called "breakthrough technology" business model centering on applying biotechnology to agriculture and biostimulants. As part of its mandate, the future business unit will rely heavily on Mohamed VI Polytechnic University and other scientific excellence centers to integrate scientific and technological advances in this area into its product offering. In addition to opening business growth prospects, biostimulants are now recognized for their role in reducing stress in plants and improving soils. There's no doubt that biostimulants could provide a concrete solution to problems specific to the African continent. Note that the African agricultural industry must increase its yields while adopting sound and sustainable natural resource management practices. The harsh and difficult climatic conditions that characterize some parts of the continent make it a market with strong potential for biostimulants.



Transforming and Recycling

Transforming and Recycling

# A SUSTAINABLE ENVIRONMENTAL APPROACH



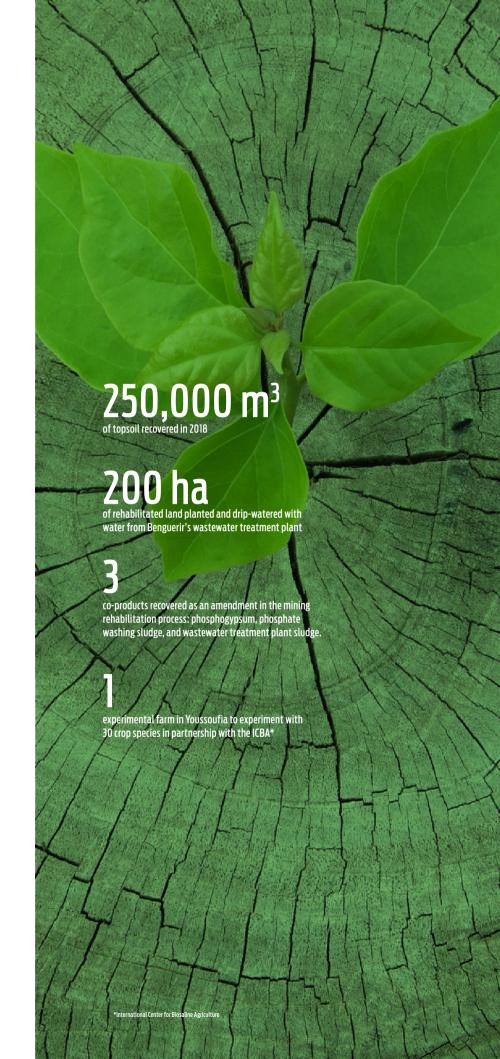
As a responsible stakeholder, OCP Group bases its entire industrial development on a environmental sustainability approach. With this in mind, OCP has been committed to rehabilitating all its mining sites for several years. All planned mining projects accordingly include a land rehabilitation project. The circular economy can become a key asset in turning OCP sites into resilient spaces by promoting sustainable development in regions for the benefit of local residents. This approach leads to a new way of planning land use through exploring region-specific scenarios, taking climates, crops, and local agricultural traditions into consideration. The notion of circularity is reflected in the collaborative approach to business ecosystems that involves communities and local participants. In addition to managing the transition of rehabilitated land, OCP's eco-friendly and circular management approach results in targeted programs to reduce waste production at the source, create storage areas with a reduced environmental impact, eliminate industrial waste, and transform waste into resources. OCP strives to create a multi-sector waste recovery ecosystem, bringing together micro-businesses, SMEs, and local organizations. This is the direction given to OCP's new strategy aimed at maximizing the socioeconomic value of its waste recovery opportunities.

#### LIFE AFTER THE MINE

The process of rehabilitating former mines starts well before mining operations begin. Before mining begins, fertile ground cover is removed and stored. This excavated soil is later used to create level ground and prepare the land for agricultural use. Restoring vegetation, encouraging reforestation and tree planting, promoting good sustainable agricultural practices at rehabilitated mines, and increasing the number of demonstration plots are all initiatives launched as part of OCP Group's mining rehabilitation program intended to create new spaces that give life to foundational job- and value-creating projects for surrounding communities and villages.

## COLLABORATIVE PROJECTS THAT BENEFIT LOCAL COMMUNITIES

Planning for a mine's closure involves not only anticipating post-mining management programs, such as rehabilitation measures to minimize the environmental impact on the site for future generations, but also implementing best practices and finding innovative partners capable of developing solutions to give the site a second life. Resolutely committed to going beyond the rehabilitation required by applicable legislation, OCP Group aims to create new spaces that restore and enrich natural environments and biodiversity. This approach aligns with OCP Group's desire to support and supervise the creation of capacity-building projects and make them collaborative, educational, ecological, and even experimental projects that contribute to regional socioeconomic development.





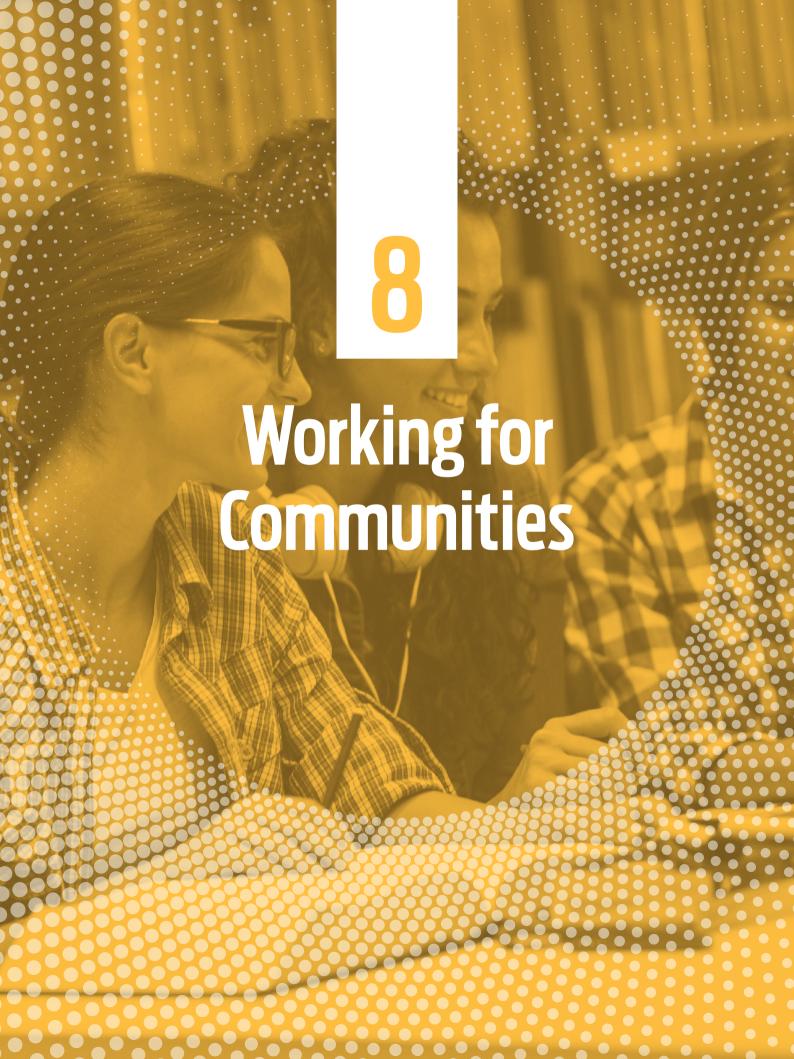
#### SULFUR ASH FROM OCP **INDUSTRIAL OPERATIONS** SITES: WASTE TRANSFORMED INTO A RESOURCE WITH HIGH **ADDED VALUE**

Sulfur ash from sulfur smelting and filtration installations at OCP processing sites has always been considered waste. Today, the review of an innovative solution to treat ashes with hydrometallurgy to produce 98% sulfuric acid is well underway. The resulting sulfuric acid will be reused at OCP's Safi and Jorf Lasfar sites. This ideal circular economy project will recover more than 18,000 metric tons of waste, generate environmental and economic gains for stakeholders, and contribute to the creation of permanent jobs for the business ecosystem. With this solution, other projects that are underway, and the integration of new sustainable business lines as part of its circular economy program, OCP is confirming its desire to turn its waste into a new driver for the development of its business ecosystem.

#### **WASTE TO POWER: FUEL AND ELECTRICITY WILL SOON BE** PRODUCED FROM OCP WASTE

As part of its ambitious circular economy program, OCP aims to build Morocco's first pyrolysis unit in the near future to maximize industrial waste recovery. Using leading-edge, high value-added, and eco-friendly waste recovery technology. OCP plans to start with a first unit at the Khouribga site before rolling them out at all operation sites. This technology will make it possible for OCP to transform more than 3,000 metric tons of hydrocarbon waste per year into fuel, diesel, black carbon, biochar, and electricity. Still from this standpoint and knowing that waste can be a major wealth creator for OCP and its collaborators. the pyrolysis unit project is being developed using the business ecosystem approach. This approach is intended to be collaborative and has many advantages: a sustainable investment that combines youth training, and the creation of new waste recovery business lines in Morocco as well as jobs. OCP's pyrolysis unit will be a step forward for not only for the circular economy and value creation, but also in terms of digitalization and artificial intelligence. It will guarantee high efficiency in waste recovery activities at OCP sites.





# DIRECT INTERACTION WITH THE DAILY LIFE OF LOCALS

OCP Group's activities have strong local roots and are characterized by direct interaction with the daily lives of locals. OCP's choices therefore impact not only its economic results, but also the communities in which it operates, the environment, and, more generally, society as a whole. Considering and involving all relevant stakeholders in OCP policies, decisions, and actions is a major concern. To address this concern, OCP went about rethinking its CSR actions to give new momentum to its social and societal actions. This is how it developed the Act4Community program. It defines OCP's newly implemented initiative and better demonstrates its social responsibility and commitment to sustainable development aimed at reconciling environmental protection and human development.

## NEW AVENUES FOR DIALOGUE AND LOCAL ENGAGEMENT

OCP is continually working to strengthen its ties with the communities near its sites. Its expertise and previously implemented original support solutions have opened up new avenues for dialogue and local engagement that contribute to building a more harmonious world. These avenues also make it possible to consolidate its leadership as a sustainable contributor in agriculture and related services, even beyond its core business. These actions all strengthen regional development where OCP operates. With this in mind, OCP designs new involvement and relation models with its stakeholders. For example, it jointly develops more and more value-creating partnerships and provides personalized support for entrepreneurship and innovation. This enables OCP to further strengthen the capacities of communities, which creates shared value and contributes to reaching the Sustainable Development Goals defined by the United Nations.



#### **OUR CONTRIBUTION TO THE DEVELOPMENT OF LOCAL BUSINESS ECOSYSTEMS**

The entire process involves the economic development of the local business ecosystem. The goal is to place OCP's resources, activities, and expertise to the service of the community and create a skilled local economic ecosystem. Strengthening social entrepreneurship for local projects with a high social impact is a priority. This involves initiating societal actions that create jobs and have a long-lasting impact through social entrepreneurship and

community development (agriculture, education, health, culture, etc.). To make this major project a success, OCP has set up support structures such as the Khouribga Incubation Center, the Center for Social Innovation, the 1337 coding school, and the YouCode school in Youssoufia. Such structures will help to support projects with a long-lasting impact while encouraging community empowerment with a clear focus on the advancement of women and youth integration.



#### THREE GROWTH-INDUCING AREAS acticommunity

## RECOGNIZED SKILLS AT THE SERVICE OF COMMUNITIES

OCP continues its commitment to community action using a shared-value creation approach through its Act4Community (A4C) initiative. Thanks to the commitment of its employees and agile operating methods. Act4Community has made it possible to implement many key actions that benefit communities. Volunteering has been a major driver behind Act4Community in the last two years. In 2018, more than 2,000 OCP employees volunteered their knowledge, expertise, and energy to the community, which made the actions posed have a high impact. Launched in 2017, Act4Community is a new social initiative that offers each employee the opportunity to volunteer in socially responsible projects for the benefit of communities. Employees can take four weeks per year, in addition to their paid vacations, to participate in community service projects that create or recreate ties to their community; supporting entrepreneurship, associations and cooperatives or identifying projects with a long-lasting impact, particularly in the cities and regions where OCP operates. In one year, the program mobilized more than 2.000 OCP employees for volunteer projects. They devoted over 4,690 days to social projects to further regional engagement and turn Act4Community into human and social advancement. In the medium term, the initiative is intended to extend its reach to other African countries and abroad. The ultimate goal is for Act4Community to become a model for larger-scale corporate volunteering and to help volunteers become responsible, supportive residents. The intent is not only to get involved in volunteer initiatives, but to sustainably contribute to the development of society and promote solidarity and mutual aid here and abroad.

### A4C: AN INNOVATIVE, BOTTOM-UP, AND DECENTRALIZED ORGANIZATIONAL MODEL



Smart, intersecting collectives that bring entities close to the field together with local communities, promoting dialogue, synergies, and value creation.



### Act4Community is an initiative based on agile and open model. What does this mean in practice?

Act4Community is an extension of OCP's CSR, in which creating shared value is a priority. All OCP employees are therefore called upon to share their expertise and skills for a positive and lasting impact on their business ecosystems and communities. In 2018, over 2,000 employees undertook outreach projects with local communities. This success is very much a result of the program's horizontal operating model. It facilitates synergies and uses an innovative bottom-up deployment system and a decentralized approach aided by the launch of Act4Community Situations. These intersecting intelligent actions unite those in the field and local communities to promote dialogue and knowledge sharing for better results.

### All employees involved in Act4Community are volunteers. How does volunteering improve CSR?

The principle involves co-developing OCP's CSR strategy with local contributors through relevant and high-impact programs. This approach tends to promote synergies between organizations and encourages greater mobilization of committed employees. Encouraging community service makes it possible to mobilize all available resources. This program offers employees up to four weeks of leave per year to serve the community through projects that create value and jobs, with a view to sharing their skills, experience, and energy. These actions are concentrated in the regions where OCP operates, primarily in Morocco, In the medium term, the initiative is intended to extend its reach to other African countries and abroad. The ultimate goal is for Act4Community to become a model for larger-scale corporate volunteering and to help volunteers become responsible, supportive residents. The intent is not only to get involved in volunteer initiatives, but to sustainably contribute to the development of society and promote solidarity and mutual aid.



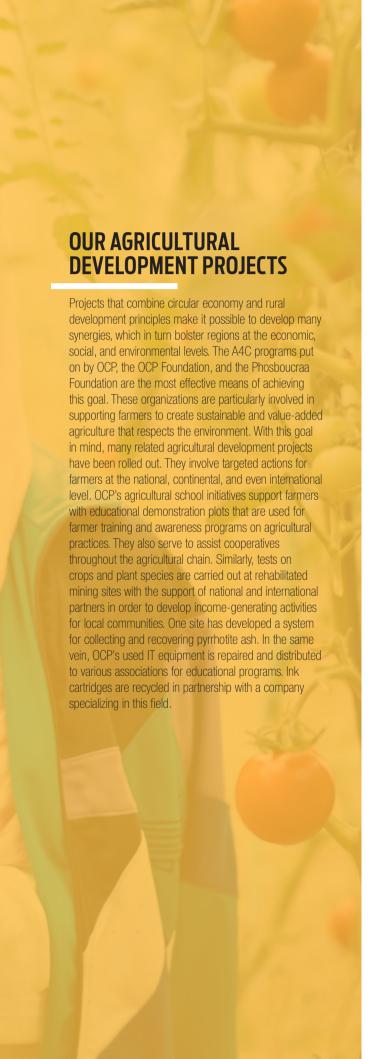
#### What are the main achievements for 2018?

Act4Community has made it possible to launch hundreds of flagship projects for infrastructure, education, the environment, agriculture, and the creation of local businesses and cooperatives with the aim of developing local business ecosystems. As part of this project, OCP has set up startup acceleratorincubators at five sites with the goal of creating 200 micro-businesses and supporting 50 digital start-ups at each location. This approach also aims to develop agricultural entrepreneurship among young people in rural areas. In concrete terms, this means creating and accelerating no fewer than 50 socially responsible companies in under 18 months with a focus on the development of mining land and socially responsible community agriculture in the sectors targeted by OCP's agricultural programs. It also serves as a driver for young people's creativity in sports, culture, and other creative professions. More concretely, it incubates and supports entrepreneurs through training mechanisms in various sports, such as basketball and soccer, and in cultural disciplines including video, photography, graffiti, and modern arts.

## PROMOTING THE LOCAL ECONOMY

OCP supports local economies everywhere it operates. This system makes OCP a catalyst for the development of high-performance local business ecosystems by supporting the creation and development of small and micro-businesses, training centers, job creation, and more, while providing a basis for improving its performance and competitiveness. OCP thus contributes to regional development and local employment by promoting bidding access for local suppliers of all sizes as much as possible while requiring responsible practices, products, and services that respect applicable laws and the environment throughout their life cycles. A new local content system has been set up with calls for tenders issued exclusively to micro-businesses near OCP sites. It also focuses on supporting young entrepreneurs. For example, all sites offer support measures for local micro-businesses and the allocation of purchasing needs through simplified access to purchasing opportunities, as well as support for local entrepreneurs to become eligible. This type of process also aims to enhance the skills of suppliers, both small and large. OCP Group also sets up support programs to strengthen their capacities within OCP's Industrial Expertise Centers in partnership with those in the Moroccan business ecosystem.







## THE COOPERATIVE MODEL BENEFITS LOCAL AGRICULTURE

With the belief that the cooperative model benefits high-quality and environmentally friendly local agriculture, OCP supports cooperatives with solid, viable business models adapted to the needs of rural communities. Such cooperatives promote gender equality by giving women more opportunities to participate in the local economy. They help to ensure consolidated offers and provide negotiating power. Innovation will act as a major lever for cooperatives to thrive and promote the agriculture of tomorrow, particularly sustainable agriculture. On an environmental level, innovation also promotes sustainable agriculture through more eco-friendly practices. Cooperatives will make products more valuable and better, especially for local agriculture. Though they have unique organizational models and local roots, cooperatives face challenges every day. Act4Community's supportive and regional development actions benefit the growth of these small businesses that often run by families or collectives. These actions help them broaden their operations throughout the agricultural value chain, increase their presence, be more competitive, and facilitate income-generating activities for cooperative members and their families.

## SUPPORTING SOCIAL ENTREPRENEURSHIP

Strengthening social entrepreneurship for local projects with a high social impact is a priority. Doing so involves initiating societal actions that create jobs and have a long-lasting impact through social entrepreneurship and community development (education, health, culture, etc.). OCP has already carried out several initiatives to promote social entrepreneurship, in particular through Act4Community, solidarity initiatives, creative entrepreneurship projects for young people, and support for local cultural associations to implement sociocultural programs in local areas. OCP helps to establish and incubate young and creative cultural entrepreneurs who will participate in sociocultural and socio-educational activities. The Khouribga Media Library is the center of these cultural activities with its diverse cultural program, workshops, guided tours, and more than 35,000 works. In 2018, the media library had 3,495 members. In addition to the 750 workshops on various topics, the media library has implemented joint programs with more than 20 associations and groups of artists to involve young people in local workshops. The OCP Foundation has dedicated an area for social entrepreneurship and the social and solidarity economy (SSE). Various OCP Foundation projects help SSE participants through support, training, skill-building, and certification assistance programs for SSE cooperatives and associations. This enables the sector to develop its talent and move toward professionalization. For example, in 2018, the OCP Foundation helped 64 cooperatives and partner associations participate in the National Exhibition of the Social and Solidarity Economy. The foundation also awarded six prizes.

## ENCOURAGING YOUNG ENTREPRENEURS IN THE SOUTHERN REGIONS

OCP Group is running a vast entrepreneurship program dedicated to the socio-economic development of the Southern regions. This program aims to promote entrepreneurship and support the creation of new local businesses with high added value. Targeting micro-businesses, cooperatives, and project-leading self-employed youth, the initiatives stimulate entrepreneurship among young people and develop entrepreneurship skills among professionals and project leaders. The Phosboucraa Foundation's offer is a complement to the support provided by the Laayoune and Dakhla Learning Centers that help micro-businesses during and after their creation stage. Its major initiatives include the MIT D-Lab programs of the renowned Massachusetts Institute of Technology in the US, the Insertion Through Economic Activity Program (PIAE), and the Competency based Economies through Formation of Entrepreneurs (CEFE) of the Mohammed V Foundation for Solidarity. The goal is to empower young people by enhancing their existing skills and assets and helping them set up projects with the potential to create added value through support and skills building. This strategy is beginning to show results in the field. It promotes the emergence of a local economy, a network of experts in entrepreneurial support, and makes development opportunities possible.





## THE QUINOA SECTOR IN YOUSSOUFIA

As part of its Act4Community initiative, OCP supports the quinoa sector in Youssoufia by participating in the development of a value chain based on primary processing, R&D, production, and export. Over three years, several OCP employees have been experimenting to adapt no less than seven different varieties of quinoa. They also carried out a study and benchmarking on the international quinoa market while setting up an industry development strategy. UM6P launched the first agronomic tests to observe the behavior of available varieties and install harvesting and polishing equipment. A seed storage area was built at the same time. This 1,000-ha cultivation project will eventually lead to the export of over 2,000 metric tons of treated seeds.

## SOUDASSI COUSCOUS: AN INNOVATIVE PRODUCT

An innovative project for the region stemmed from a research program conducted by the Phosboucraa Foundation on new salt-tolerant crops at the Foum El Oued perimeter in Laayoune. The Al Ayafaa cooperative, composed of 30 women of all ages who are supported by the Phosboucraa Foundation, is dedicated to producing a new type of couscous from six cereals, including quinoa, called "Soudassi couscous." Developing this new product required support at several levels including setting up the premises, acquiring necessary production equipment and the initial supply of raw materials, and training in managerial and commercial skills and guinoa production techniques. This support throughout the value chain, including product packaging and promotion, has enabled this cooperative to gain momentum and enter markets. The success of this initiative can be measured by consumer enthusiasm for Soudassi couscous at the Exhibition of the Social and Solidarity Economy in which the cooperative participated in November 2018 in Agadir.

# THE FOUM EL OUED PROJECT COMBINES RESEARCH AND SOCIAL INNOVATION

Structured around an integrated approach to agricultural development, the Foum El Oued project has achieved significant technical and human achievements over four years. They aim to boost farmers' yields while improving their incomes and living conditions. The initiative was continued through agronomic tests to introduce new salttolerant species, the promotion of new technical practices, farmer training, improved services for local communities, and support for small-scale projects that generate income in rural areas. By the end of December 2018, 52 farms averaging 8 ha had the opportunity to cultivate their land in a profitable and sustainable way. The cooperative program, conducted in collaboration with the International Center for Biosaline Agiruclture (ICBA), the National Institute for Agricultural Research (INRA), and the Sakia El Hamra Cooperative is conducting ongoing agronomic tests in Foum El Oued. They cover the agricultural production of alfalfa, blue panicum, barley, beets, sesbania, guinoa, millet, sorghum, and triticale. Research continues on new salt-tolerant crops.

4 Agronomic tests

1,213

Young people trained

545

Training days for farmers







#### **DRIVING R&D**

As part of OCP's efforts to promote Africa's research and innovation ecosystem, the OCP Foundation supports global reference structures such as the Mohammed VI Polytechnic University in Benguerir; the MAScIR Foundation, which works with biotechnology, microelectronics, materials, and nanomaterials; and the R&D fund around phosphates. The fund. established in collaboration with the Ministry of Higher Education, Scientific Research and Executive Training and the National Center for Scientific and Technical Research, develops synergies with various institutions on a daily basis, in particular UM6P, which plays an important role in the scientific and technical approval process of projects. In 2018, the R&D fund supported 39 projects in 10 areas (materials, acids, processing, etc.) with teams mobilizing 404 people, including 274 national researchers, 74 international researchers, and 72 doctoral candidates.

## THE ACT SCHOOL TO PREPARE YOUNG PEOPLE

Using the innovative teaching model promoting peer learning and experimentation created by the Connect Intitute, OCP has integrated Act School's educational, cultural, and incubation programs into its solidarity offer to advance education. ACT School aims to develop young people's skills and talents and prepare them for professional integration. The program was launched in December 2018 in Youssoufia with 60 young people who are still participating. It lasts one year and is aimed at young people from 18 to 28. The goal is to develop and strengthen their critical thinking, collaboration, communication, and creative skills to promote inclusion and social diversity. The learning program ends with an incubation period including support for professional projects designed by the participants.

## NEXT-GENERATION CODING SCHOOLS FOR DIGITAL INCLUSION

Digital technology opens up new ways of approaching and transmitting knowledge. OCP is taking this opportunity to help young people learn new digital skills through several innovative and adapted educational models that have already been proven around the world. OCP has turned technology into a driver for digital inclusion by launching two IT training schools with the 42 and Simplon international training networks: 1337 in Khouribga in July 2018 and YouCode in Youssoufia in October 2018. These next-generation coding schools in Morocco are based on innovative teaching, 1337 leverages a collaborative peer-learning approach that makes it possible for students to unleash their creativity. while YouCode harnesses active pedagogy and places students at the heart of the learning process thanks to knowledge acquisition in project mode. 1337 and YouCode will eventually have the capacity to welcome 900 and 200 students, respectively. There are currently 214 students in Khouribga and 112 in Youssoufia. Addressing both employment and integration issues with digital technology, these nextgeneration schools offer innovative pedagogy that opens more opportunities for Moroccan and African youth. Accessibility, equal opportunity, and zero tuition together provide young people with development opportunities and jobs of the future. The 1337 (Khouribga and Benguerir) and YouCode (Youssoufia and soon Safi) initiatives were carried out as part of the Act4Community program and have benefited nearly 1,000 young people to date. By the end of 2019, more than 1,000 young people will be studying for digital and innovative professions at these schools. These learning projects are intended to complement OCP's and UM6P's missions to develop knowledge, innovation, and technology. The ultimate goal is to create an innovative hub on a national, continental, and international scale.



#### YOUCODE IS MORE THAN A SCHOOL, IT'S A PHILOSOPHY

Created in October 2018 by OCP in partnership with the Simplon.co factory network, YouCode is more than just a name, it's a philosophy. And for good reason—this inclusive next-generation school places the individual at the center of education while developing synergy and group work among students. Based in Youssoufia, the school's entire pedagogical approach leverages active pedagogy that confronts learners with concrete situations through individual and group projects. At the crossroads of professional expertise and the needs of companies and participants in the labor market, YouCode uses peer support and assessment along with instructor supervision to make the group a central learning component and ensure learning and professional integration. YouCode aims to prepare young people to become full-stack web developers. This intensive and free professional training course has no technical or educational prerequisites.

## 1337 IS A TOTAL IMMERSION IN CODING

This partnership between OCP Group and the 42 school in Paris, 1337 (pronounced Treize, Trente-Sept, which means thirteen, thirty-seven), is entirely dedicated to training future coders. OCP Group chose to build the first innovative school in Khouribga. The second will open in Benguerir in May 2019. The schools exclusively provide training in computer coding and programming. It's completely free and open 24/7. Its academic approach is threefold. The first is peer-to-peer learning, in that each is responsible for part of OCP's success and benefits from collective intelligence. The second involves gamification and progression, so that each student develops skills through projects and receives experience points to unlock the next level, much like a video game. The third is time flexibility, allowing students to progress at their own pace instead of following a class's pace. It is thus a personalized program. This innovative type of training is accessible to all without any diploma prerequisites. Participants simply have to pass the final test called "the Pool": a one-month code immersion to be admitted to the school.



2,749

Candidates have taken the online tests

**years** 

Duration of training

112

Candidate

Campus in Youssoufia and another in Safi as of October 2019 900

Candidates have been immersed in the Pool\*

years

Average duration of training

325

Students since October 2018

1

Campus in Khouribga and another in Benguerir as of May 2019

## SCHOLARSHIPS AND EXCELLENCE

Through its OCP Foundation, OCP Group has an extensive scholarship program for deserving students. In 2018, 1,710 students received scholarships from the Phosboucraa Foundation for the 2018-2019 school year, including 606 enrolled in the French Grandes Écoles, 600 at the Benguerir School of Excellence, 304 at UM6P (EMINES, Master's and Bachelor's degrees), and 133 beneficiaries from the Southern regions. The School of Excellence aims to promote leading scientific and technical education in partnership with the Ministry of National Education, Vocational Training, Higher Education, and Scientific Research. The School, which began offering qualifying programs and higher education preparatory classes (CPGE) in September 2015, had 667 students living on campus in September 2018. In its second year, 99 students took the written exams for admission to the top engineering schools and were admitted to the Moroccan and French Grandes Écoles, Nearly 1,126 students began the 2019 year at the School. OCP, through the OCP Foundation, continues to develop this project, in particular by increasing the number of qualifying high school and CPGE students, as well as the number of teachers and educational staff, accommodation capacity, teaching materials, and furniture.

students admitted to the Moroccan and French Grandes Écoles

students at École Polytechnique in France

School of Excellence MP CPGE ranked

for students applying to École Polytechnique\*

\*Source: letudiant.fr



#### SPONSORED SCHOOLS

The Sponsored Schools Program is an OCP Foundation integrated educational offer. It is based on a global vision, which considers the school environment and targets various stakeholders for an overall impact on student success. In 2018, 31 schools were sponsored at the national level with more than 200 beneficiaries receiving teacher training and 100 in community support programs. More than 50 school clubs have been created (life skills, environment, reading, art, etc.).

#### THE RHAMNA, YOUSSOUFIA, AND KHOURIBGA SKILL CENTERS

The Skills Centers arose from the desire to offer young people friendly and all-encompassing places where they can receive training and supervision that encourage employment, association-based initiatives, and various other activities. They had strong results in 2018:

- A socio-professional support program for young people:
   2,069 young people trained and 816 supported.
- Support for associations:
   225 associations benefited from the skill-building program and
   224 association-based projects received funding.
- Support for micro-businesses:
  - -137 local companies created and supported
  - -145 micro-businesses and startups accelerated
- Support for cooperatives:
   37 cooperatives accelerated in terms of marketing and sales,
   17 of which received financial support.



## ARTISTIC AND CULTURAL WORKSHOPS

OCP has backed several actions to preserve local heritage. It supported the African film festival in Khouribga by paying tribute to Angolan culture. In the Southern regions, it opened the Dakhla Cultural Salon. A program to create six reading areas was also rolled out in Laayoune for the benefit of young people. In addition, the *Sport nature solidaire pour toutes* initiative was launched in partnership with the Lagon Dakhla association. Many other training courses were also provided, one of which gave 240 hours of graphic design training to 33 beneficiaries.

#### CULTURAL INITIATIVES: DIVERSE PROGRAMMING AT THE KHOURIBGA MEDIA LIBRARY

Created in 2016, the Khouribga Media Library has a diverse cultural program of workshops, guided tours, and 35,000 physical, digital, audiovisual, and braille works in its collection. In 2018, the media library had 3,495 members. It helped to organize nearly 750 activities and workshops while creating joint programs with 20 associations and artist groups. In the same year, the media library managed to have 23 local collaborators participate in its various workshops and actions within and outside the media library.







