n a frequent basis, we participate in various venues where multiple parties discuss a range of critical issues confronting the mining sector. Some say the sector faces extreme challenges over the near to medium term and that the sector must adopt new business models, increase innovation, partner with communities, and find new ways of engaging with stakeholders.

At Freeport-McMoRan we have a very bright future. We have a dynamic portfolio of long-lived mining assets and are positioned to respond to society's demand for copper - a fundamental material used in numerous products relied upon by consumers everywhere, including those around the globe looking to improve their standard of living. As a leading mining company with global operations, we recognize and acknowledge the challenges we face. We also know that we must work hard every day to improve our operations because mines of the future will require innovative technology to lower costs, increased stakeholder engagement combined with private/public partnerships for social investments, and responsiveness to various risks and opportunities that can affect timely resource development.

The principles of safe production provide us with a solid foundation upon which to build mines that will be thriving decades from now. We take advantage of economies of scale and capital efficiency while utilizing technologies to drive cost and efficiency improvements. Freeport-McMoRan employees are ambassadors for sustainable development within their own communities and provide a nexus to informed community acceptance of our business. Our mines will continue to be developed through sincere relationships built on trust and hard work for the benefit of all concerned. Throughout this report, we report the daily progress our workforce is making on key issues, including some emerging, which affect our Company and our stakeholders.

# Freeport-McMoRan Oil & Gas LLC

This WTSD report primarily focuses on our mining and metals operations which are implementing programs developed in alignment with the ICMM Sustainable Development Framework. While our oil and gas operations are excluded from the boundary of this framework, FM O&G operates in accordance with all Freeport-McMoRan policies and governance structures. Operating in a highly-regulated industry in the U.S., FM O&G maintains audited safety and environmental management systems and emergency response procedures. The business also maintains stakeholder engagement mechanisms, primarily surrounding our onshore operations near high density populations.

The nature of our business impacts the environment and communities surrounding our operations. We mitigate impacts to the extent practicable through state-of-the-art control and remediation measures. We develop infrastructure, support health, safety and education efforts, and provide local employment and business development opportunities. The products we produce are critical for sustainability and higher standards of living. To supply essential natural resources to current and future generations, we are guided by our stated business objectives, principles and policies, and we continuously strive to improve our sustainable development programs.

# **OUR APPROACH HAS THREE CORE ELEMENTS**

# **ECONOMIC**

Leverage our operating and financial expertise, technologies and supply chain to ensure that we remain a vibrant, sustainable business entity.

#### **ENVIRONMENTAL**

Evaluate environmental aspects continuously throughout a project's life cycle to minimize adverse impacts and promote opportunities.

#### SOCIAL

Operate safely, and uphold and respect human rights. Engage openly and transparently with internal and external stakeholders and keep our commitments in order to build trust. This enhances our ability to obtain permits to operate and ensures we have a dedicated workforce.

#### PRINCIPLES OF BUSINESS CONDUCT

The overarching values detailed in our Principles of Business Conduct set forth the global system of principles that our workforce must follow in all activities - from complying with laws and avoiding conflicts of interest to developing positive relationships in local communities. The Freeport-McMoRan Supplier Code of Conduct sets forth our expectations for our supply chain partners in areas including safety, anti-corruption, environment and human rights.

Our supporting policies, along with external standards and initiatives, form the overall framework that guides our sustainability programs. Supporting this framework are internal governance and management systems that provide the details on how we operate.

#### **GOVERNANCE**

The Freeport-McMoRan Board of Directors (board) as a whole is responsible for risk oversight, with reviews of certain areas being conducted by the relevant board committees that report to the full board. In its risk oversight role, the board reviews, evaluates and discusses with appropriate members of management whether the risk management processes designed and implemented by management are adequate in identifying, assessing, managing and mitigating material risks facing the Company. In addition, as reflected in our Principles of Business Conduct, the board seeks to establish a "tone at the top" communicating the board's strong commitment to ethical behavior.

Board committees assist the board in fulfilling its oversight responsibilities with respect to certain areas of risk. Each committee regularly reports on these matters to the full board. The Corporate Responsibility Committee of our board is responsible for overseeing our policies and programs related to management of risks associated with the Company's safety and health policies and programs, environmental policy and implementation programs, human rights policy and practices, community health programs and related public health and medical matters, community policy and practices, governmental and stakeholder relations and social investment and sustainable development programs, charitable contributions, and political activity and spending practices. The committee examines key performance data and receives briefings concerning challenges and emerging issues in these areas.

During 2014, the Corporate Responsibility Committee received various reports and considered numerous items with a particular focus on safety, which included reviewing the root causes of fatal accidents,

corrective actions implemented to prevent accidents in the future, enhancements to our fatality prevention program and improvement in our safety procedures and practices. In addition, during the year, the Corporate Responsibility Committee reviewed the 2014 external environmental audit of PTFI's operations, community public health services including our malaria prevention programs in Indonesia and the DRC, and cholera response efforts and clean water program in the DRC, global social programs and expenditures, community engagement efforts, habitat restoration and enhancement, various wildlife preservation programs sponsored by our Company, and political activity and spending practices. The Corporate Responsibility Committee reports to our board, which provides oversight on all matters, including the economic viability of our Company - the first element of our approach to sustainable development.

The board believes that full and open communication between senior management and the board is essential to effective risk oversight. Our chairman and our vice chairmen regularly meet and discuss with senior management a variety of matters including business strategies, opportunities, key challenges and risks facing the Company, as well as management's risk mitigation strategies. The board oversees the strategic direction of our Company, and in doing so considers the potential rewards and risks of our business opportunities and challenges, and monitors the development and management of risks that impact our strategic goals.

Our executive compensation program is designed and managed by the independent Compensation Committee of our board. During 2014, the committee developed a scorecard to measure environmental and social responsibility performance for 2015. For the scorecard the committee considered the environmental performance with respect to environmental penalties, reportable spills and releases, and notices of violation. With regard to the social responsibility category, the committee considered a corporate-level human rights impact assessment to further integrate the UN Guiding Principles on Business and Human Rights into our programs, investment in community programs, and third-party feedback and recognition of sustainability programs. Safety performance, measured by total recordable incident rate, continues to be evaluated as part of our executive compensation program.

#### SUSTAINABLE DEVELOPMENT LEADERSHIP TEAM

The Freeport-McMoRan Sustainable Development Leadership Team provides strategic and operational guidance regarding our sustainability commitments. The team is sponsored by our Executive Vice President and Chief Administrative Officer, and is led by our Vice President of Environmental Services and Sustainable Development. The team includes business unit presidents and senior personnel from the safety, supply chain, human resources, sales, compliance, and land and water functions.

During 2014, the team reviewed and addressed key issues and projects including:

- Updates to the Company's Health and Safety, Environmental, Human Rights and Community policies to reflect our sustainable development program commitments today
- Review of the process and results of a corporate-level human rights impact assessment (HRIA) and planning for a site-level HRIA at our TFM operation in the DRC
- Monitoring emerging regulations and initiatives related to product stewardship and access to markets
- Reviewing long-term water management and supply projects
- Reviewing materiality prioritization of reporting aspects, considering stakeholder input, in preparation to report according to the GRI G4 guidelines beginning with the 2015 WTSD report
- Implementation of the ICMM Sustainable Development Framework, including observations and recommendations from our site-level external assurance program
- Evaluating a variety of topics and learnings through participation in peer to peer, multi-industry associations with a sustainability focus

## STAKEHOLDER ENGAGEMENT

Project planning and our project life-cycles can span decades. We consider early and effective engagement with stakeholders critical for creating mutually beneficial opportunities and reducing sustainability risks to our plans. Accordingly, we seek strategic partnerships with host governments, communities and development partners to ensure the viability of our projects while delivering meaningful benefits.

Freeport-McMoRan's corporate Sustainable Development Department and senior personnel regularly work with the socially responsible investment community and nongovernmental organizations (NGOs) through in-person meetings and site visits, teleconferences, inquiries via email and conferences. In 2014, our corporate team engaged with over 50 investor organizations, sustainability analyst firms, banking institutions and NGOs on topics including fatality prevention, environmental management, revenue transparency, human rights, resettlement programs, water resources and community development.



Former Minister of Energy and Mines of Peru, Eleodoro Mayorga (third from the left), and Cerro Verde management observe the construction of a wastewater treatment plant that will enhance water quality in the Arequipa region. The plant will supplement current water supplies to support the expansion of concentrator facilities to 360,000 metric tons of ore per day.

Our operational-level teams regularly engage locally with community stakeholders, development institutions and NGOs. Mining operations maintain 5-year community engagement and development plans that identify affected or interested parties and programs for ongoing engagement and consultation. Issues raised through stakeholder engagement help inform the risks and opportunities identified in each operation's sustainable development risk register and assist in developing social investment strategies. Resulting engagements with hundreds of entities occur via community foundations, formal grievance systems, workshops, participatory group panels or focus groups, town hall meetings and surveys. Engagement with stakeholders also occurs through regulatory consultation processes with local governments and community groups, including indigenous peoples, as part of expansion plans for our copper business.

## **PRODUCT STEWARDSHIP**

Interest in environmental and social performance within the value chain is rising among stakeholder groups. We view this trend as an opportunity to engage on the critical importance of our products for a sustainable future as well as on the performance of our operations. However, we want to communicate effectively and efficiently, and are cautious of the potential for redundant or unnecessary regulations, policies, initiatives or ad-hoc requests for information concerning our products and sustainability within our operations.

To remain a viable business entity, we must maintain market access for our products over the long term. As such, we have established a multi-functional coordination team that regularly coordinates to address an agenda that includes:

 Responsiveness to due diligence information requests from value chain members



Cobalt hydroxide production at Tenke Fungurume Mining

- · Analysis and input regarding emerging regulations, policies or initiatives
- Tracking and interfacing on the product stewardship work of the International Copper Association, ICMM, Cobalt Development Institute, International Molybdenum Association and other organizations
- Proactive communications in the value chain and with other stakeholders concerning common stewardship and sustainability performance attributes of our products and operations, respectively
- Mandatory compliance requirements

While the product stewardship function reports to our Vice President of Environmental Services and Sustainable Development, it is coordinated with our product sales teams. We engage with both downstream customers and international governmental agencies on sustainability and address specific environmental and public health areas of interest that affect access to markets for our various products.

#### **AUDITS AND ASSESSMENTS**

To ensure our policy commitments and objectives are being met, we implement a combination of audit and assessment programs along with an annual program for site-level assurance of the ICMM Sustainable Development Framework. Every major operation undergoes a comprehensive internal audit (including contractors) of environmental and health and safety systems at least once every two years. Our operations also are routinely inspected by regulatory agencies or ministries of host governments. The health and safety management systems and environmental management systems of our operations obtain independent certification to Occupational Health and Safety Assessment Series (OHSAS) 18001 and International Organization for Standardization (ISO) 14001, respectively. These systems include corrective and preventive action tracking for internal and external audit findings. The most recent triennial external environmental audit at PTFI was completed in 2014 and the summary results are available on our website. Customers or financial institutions also request to conduct, from time to time, sustainability focused audits or assessments at certain facilities depending on geographic location and life-cycle stage. As we progress our implementation of the UN Guiding Principles on Business and Human Rights, we have commenced a site-level human rights impact assessment at our TFM operation in the DRC.

#### SUSTAINABLE DEVELOPMENT RISK REGISTER

The Freeport-McMoRan Sustainable Development framework is designed for alignment with the ICMM Sustainable Development Framework and implemented based on site-specific factors and influences. Since 2009, our framework has continued to evolve and varies in maturity of its implementation at operations. Essential to our framework is the Sustainable Development Risk Register process, which prioritizes safety, environmental, social, economic and value chain challenges and opportunities based on our views of potential impacts to our business and the importance of these topics to stakeholders. As part of this process, local management teams utilize a matrix with consequence categories including potential safety, community, environmental and production impacts. Our Sustainable Development Department works with operational management teams to review processes to ensure prioritization of key business risks and implementation of associated action and monitoring plans. On an annual basis, a corporate, cross-functional team of senior personnel reviews the Sustainable Development Risk Registers of our major operations. This process provides a mechanism to ensure risk profiles are commonly understood at the operating and corporate levels.

Resulting sustainability focus areas identified through this Sustainable Development Risk Register process are reviewed annually by our Sustainable Development Leadership Team and communicated to the Chairman and Vice Chairman of the Corporate Responsibility Committee of the board. The focus areas have not changed significantly over recent years and are described on the following pages and throughout the report.



Artisanal mining activity within the TFM concession

## **ARTISANAL MINING**

Illegal artisanal and small-scale miners have limited equipment and expertise with respect to operating in hazardous conditions and can create social and environmental impacts, including placing their own health and safety at risk. (p. 27)

#### **BIODIVERSITY**

We own, lease and operate large land holdings around the world, some of which are in and adjacent to areas of high biodiversity value. We manage our operations in a manner to identify impacts and, where practicable, implement actions that conserve and enhance biodiversity, including reclamation activities. (p. 32)

#### **COMMUNITY ENGAGEMENT AND DEVELOPMENT**

Our social and economic development programs are responsive to issues raised by communities, including vulnerable groups such as indigenous peoples, and help us maintain good relations and avoid disruptions of operations. Nevertheless, social and political instability in the areas of our operations may adversely impact our operations. (p. 23)

#### **CORRUPTION**

As a company with global operations, our business may be adversely affected by issues related to corruption. Our international operations must comply with the U.S. Foreign Corrupt Practices Act and similar anti-corruption and anti-bribery laws of the other jurisdictions in which we operate. Any violation of these laws could result in significant criminal or civil fines and penalties, litigation, and loss of operating licenses or permits, and may damage our reputation. (p. 18)

## **ENERGY MANAGEMENT**

Carbon-based energy is a significant input in our operations, and our revenues include significant sales of oil, NGLs and gas, and other carbonbased energy products. Increased regulation of greenhouse gas emissions may increase our costs and may also affect the demand for our products. We have modeled multiple carbon tax scenarios to understand possible impacts, or the range of possible increases to our operating costs. (p. 28)

#### **HUMAN RIGHTS**

Our operations may be adversely affected by impacts from security risks stemming from events or activities including political instability, labor strikes, illegal artisanal mining and civil strife. The Voluntary Principles on Security and Human Rights serve as guidelines for our security and human rights programs, interactions with host government police and military personnel, and with private security contractors. We also are integrating the UN Guiding Principles on Business and Human Rights into our business systems. (p. 20)

#### LABOR RELATIONS

As of December 31, 2014, 48 percent of our global labor force was covered by collective bargaining agreements and 28 percent of our global labor force was covered by agreements that will expire during 2015, including the agreement covering employees at our Indonesia operations. We continue to engage openly with our employees and union leadership to successfully negotiate labor agreements recognizing that prolonged strikes or other work stoppages at our operations can adversely affect our business and local and regional stakeholders. (p. 14)

#### PRODUCT STEWARDSHIP

Our product stewardship team engages both downstream customers and international governmental agencies on sustainability topics. The team also addresses specific environmental and public health areas of interest that affect access to markets for our products within the value chain. (p. 8)

## **SAFETY AND HEALTH**

The safety of our workforce at all of our operations is our highest priority. Although we achieved the lowest Total Recordable Incident Rate in the Company's history, we sadly incurred seven fatalities in 2014. We work continuously to eliminate fatalities by identifying and implementing critical controls reinforced by technical training and communications throughout the workforce. (p. 15)



Monitoring reclaimed overburden stockpiles at PTFI

# TAILINGS AND WASTE ROCK MANAGEMENT

Managing the volume of waste rock, leach material and tailings produced in our mining operations presents significant environmental, safety and engineering challenges and risks. We maintain large leach pads and tailings impoundments containing viscous material, which are effectively large dams that must be engineered, constructed and monitored to assure structural stability and avoid leakages or structural collapse. Our tailings impoundments in arid areas maintain programs to suppress fugitive dust emissions. (p. 30)

#### WATER SUPPLY AND MANAGEMENT

Most of our operations in North America and South America are in arid areas and access to quality water supplies is significant to multiple stakeholders, including local communities. We maintain programs to promote efficient use of water and are advancing alternative water supply projects. We also maintain systems to control acid rock drainage. (p. 30)

PERFORMANCE TARGETS	2014 Status	2014 Performance Description	Target Date
<b>Business Ethics</b>			
With our online training module, annually train 90% of targeted employees who interact with, or have the potential to interact with, government officials on anti-corruption laws, regulations and Company policies and procedures	$\checkmark$	96% of targeted employees completed the anti-corruption online training course.	Annually Recurring
Workforce			
Increase the percentage of women in our workforce, including representation in managerial positions, to 15%	X	Women comprise 10% of our employee population and hold 11% of all managerial positions, which is relatively unchanged from recent years.	Ongoing
Safety & Health			
Incur zero fatalities <sup>a</sup>	Х	Sadly, we incurred seven work-related fatalities at our mining operations in 2014.	Annually Recurring
Meet company-wide total recordable incident rate (TRIR) <sup>a</sup> of 0.61	$\checkmark$	Our TRIR <sup>a</sup> was 0.56 for 2014, a company record.	Annually Recurring
Human Rights			
Incur zero gross <sup>b</sup> human rights violations at our operations caused by employees and contractors	V	We did not incur any gross human rights violations at our operations caused by employees or contractors. For more information on our human rights programs, please see page 20 of this report and our Voluntary Principles on Security and Human Rights 2014 Report to the Plenary on our website.	Annually Recurring
Communities			
Invest (in aggregate) 1% of the average of the previous three years annual mining operations revenue, as reported in Freeport-McMoRan's audited consolidated financial statements, in community programs, including in-kind support and administration (2014 target of \$199 million)	V	Approximately \$198 million was invested in community programs across our operations (99% of our target), relatively unchanged from the prior year despite lower commodity prices.	Annually Recurring
Implement at least two new community programs that are directed at supporting the development of women	V	We have advanced women's economic empowerment programs, including entrepreneurial training for Native American women; a women's leadership program to promote advancement in the private and public sectors; and a program aimed at increasing interest and achievement in science, technology, engineering, mathematics (STEM) among girls and women.	2014
Work with regional and local governments, community stakeholders, private sector developer(s) and businesses, to commence construction of town infrastructure and residential housing in the Integrated Development Zone in our TFM concession to support sustainable urban growth	On Schedule	A Strategic Environmental and Social Impact Assessment (SESA) was conducted in 2014 on the Integrated Development Zone (IDZ) concept. The sustainability risk management strategies derived from the SESA are being incorporated into the IDZ project design.	2016
Environment			
Incur zero significant environmental events (rating of three or higher on Sustainable Development Risk Register)	$\checkmark$	We did not incur any significant environmental events. We did have 14 spills or releases that were reportable to national agencies based on applicable regulations.	Annually Recurring
Incur zero penalties more than \$100,000	V	Our operations did not incur any penalties exceeding \$100,000.	Annually Recurring

a. Includes FM O&G

b. There is no uniform definition of gross human rights violations under international law; however, the United Nations Office of the High Commissioner report: The Corporate Responsibility to Respect Human Rights - An Interpretive Guide, provides guidance on identifying such types of violations.

s a natural resource company with a leading global portfolio of assets, we continue to advance significant expansion projects, and our exploration drilling programs continue to identify opportunities for future reserve and production growth. The ability to achieve our business goals depends on successfully recruiting and retaining talented employees. We offer not only competitive compensation and benefits, but also a culture of personal and professional development throughout career progression.

#### LOCAL HIRING AND SKILLS DEVELOPMENT

We make concerted efforts to hire locally, as this practice incorporates local cultures and knowledge into our business systems and helps fulfill our commitment to supporting local economic development both directly and indirectly. For example, at our largest operation, PTFI, located in the remote province of Papua, Indonesia, our policy is to prioritize the hiring of indigenous Papuans. At yearend 2014, 99 percent of PTFI employees were Indonesian and of that total, 35 percent were indigenous Papuans (up from 32 percent three years prior). At our TFM operation, located in the DRC, 98 percent of our employees are Congolese citizens.

Our regional technical training programs prepare community members for careers in mining, even though trainees have no obligation to join our Company. The Nemangkawi Mining Institute in Papua, Indonesia has placed over 2,300 apprentices into permanent employee and contractor positions to date at PTFI, over 90 percent of whom are indigenous Papuans. As PTFI prepares to transition from open-pit mining to underground mining, Nemangkawi is also transitioning from focusing on new employees to focusing on retraining existing employees.

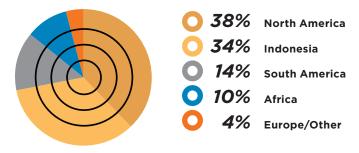
Our technical training program with the San Carlos Apache Tribe in Arizona, the first of its kind between Freeport-McMoRan and a U.S. Native American tribe, is intended to increase the employability



Employees participate in an interactive two-day course titled Crucial Conversations in which participants learn skills to promote open dialogue between co-workers, including supervisors. Freeport-McMoRan's Learning and Leadership Development program offers courses designed to improve the productivity and effectiveness of our workforce.

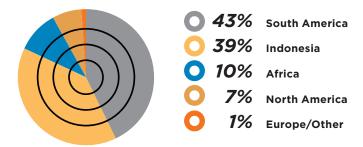
#### **EMPLOYEES**

Approximately 35,000



#### **CONTRACTORS\***

Approximately 46,300



<sup>\*</sup> The Increase in contractors over recent years is primarily attributable to construction of brownfield expansion projects in our copper business.

and skills of Apache students who are faced with high unemployment in their community. The program is designed to train and certify students in heavy equipment operations and industrial maintenance. Through the end of 2014, a total of 452 students have entered the program and 171 have graduated – 75 percent of whom have been hired or are in the process of being hired by the Company. We now employ approximately 290 Native Americans at our U.S. operations, an increase of over 40 percent from three years prior.

The Cerro Verde mill expansion, which will become the world's largest concentrator, is expected to be completed in late 2015. In preparation, Cerro Verde has begun hiring personnel, with a preference to hire qualified persons from the Arequipa region. Cerro Verde also maintains a partnership with TECSUP, Peru's premier technical training institute as part of its efforts to train community members in mining. In 2014, Cerro Verde partnered with TECSUP to develop a training program for participants interested in concentrator maintenance and operations. The program began in January 2014, and in December, the class of 173 students graduated, over 100 of whom have been hired by the Company.

Workforce data includes FM O&G



Workforce members meet for a safety briefing prior to a shift on the Cerro Verde expansion project.

#### **LABOR RELATIONS**

As of December 31, 2014, our workforce consisted of approximately 35,000 employees and 46,300 contractors. Approximately 48 percent of our employee population is covered by collective bargaining agreements, 28 percent of which is covered by agreements that will expire during 2015. We work cooperatively with 26 unions worldwide. Our policy is to ensure fair treatment and work conditions for all employees, including rights to freedom of association and collective bargaining. Employees have the right to exercise freedom of association at all of our operations.

During 2014, several events affected our unionized employees. We reached a new Collective Labor Agreement at our Stowmarket operation in the United Kingdom. Also during the year, members of the labor union in Chino (New Mexico) voted to decertify. In October 2014, a large percentage of Grasberg open-pit operators did not report to their scheduled shifts, notwithstanding approval of resumption of operations by Indonesian authorities upon completion of their investigation of a fatal haul truck accident that occurred near the Grasberg open-pit.

#### **DIVERSITY**

We operate in regions of varying ethnic, religious and cultural backgrounds and are generally the largest employer in local communities. The resulting diverse backgrounds and perspectives within our workforce are an asset to our business. We prohibit discrimination and harassment, and our Principles of Business Conduct and Human Rights Policy require that all employees treat everyone in and around our operations with dignity and respect.

We seek ways to recruit and foster career development for women in our Company, as women traditionally have been underrepresented in the mining sector. We have several women in key management roles within our organization, including our Chief Financial Officer, and two members of our Board of Directors. Over 300 women hold management positions, or manager or higher positions in the Company. The percentage of women represented in our Company varies across geographies, from a high of 17 percent in North America to a low of four percent in both Africa and Indonesia. The percentage of women in our employee population remains at 10 percent overall, which is below our 15 percent target. We participated in 47 recruiting events in 2014 in North America alone, including those intended to increase the diversity of our employee base, such as the Society of Women Engineers Conference.



TFM Human Rights Coordinator Ida Efenda facilitates a human rights training session.

#### PERCENTAGE OF EMPLOYEES UNDER COLLECTIVE BARGAINING AGREEMENTS

By Operating Region	Africa	Indonesia	Europe/other	South America	North America	Company-wide
	98%	77%	66%	64%	0%	48%

afety is integral to all Freeport-McMoRan operations and is the responsibility of all employees and managed by a formal structure starting with our Safety and Health Policy. Our philosophy of safe production is demonstrated by the integration of safety practices in all aspects of our operational activities. Our Board of Directors requires comprehensive audits to assure the safety management system is effective, weaknesses are identified and resources are applied to achieve the Company's policy objectives.

Our Health and Safety Management System consists of a framework for managing risks and compliance obligations. Our Management System is certified in accordance with the internationally recognized OHSAS 18001 standard. OHSAS certification audits are conducted at all metals and mining operations on a yearly basis. Twenty-three certification audits were conducted in 2014, including all active mining operations. These certification audits are supplemented with fatality prevention audits that focus specifically on high risk activities and are conducted by an independent organization using experts within the mining sector.

We draw no distinction between contractors and our own employees with regard to health and safety performance and reporting. The Freeport-McMoRan Contractor Safety Manual defines the minimal expectations and requirements for contractors working at our operations. Site-specific training is conducted with each contractor regarding safety and health issues specific to their work location, including task-specific hazard identification and control implementation. Training on regulatory-specific topics also occurs regularly.

We measure progress toward achieving our objective against regularly established benchmarks, including measuring company-wide Total Recordable Incident Rates (TRIR) across our businesses. Our TRIR (including contractors) was 0.56 per 200,000 man-hours worked in 2014, exceeding our target of 0.61. The company-wide TRIR in 2014 is the lowest in the Company's history. We worked 202.5 million hours in 2014 compared to 175 million hours in the prior year, and we recorded a total of 567 reportable injuries in 2014 compared to 649 in 2013.

#### **FATALITY PREVENTION**

We are continuing to refine our global Fatality Prevention Initiative and are learning more about best practices to enhance processes to reach our goal of zero fatalities. Ensuring workforce understanding of the critical controls necessary to eliminate or reduce the risk is our clear focus. We are working with industry experts and safety professionals to audit tasks and ensure that identified controls are being utilized and are effective. Using the hierarchy of controls, we implement controls at the highest level possible, working to reduce the reliance on behavioral controls and instituting more

# Fatality Prevention Training Now

Prevent the Event – Learn How

The on-site training reinforces the knowledge, skills and attitudes needed for Safe Production.

Ask your supervisor for details



This training highlights the fact that the power to prevent fatalities is in the words we speak and the actions we take as leaders. By making many small changes in our approach, we can work as a team to prevent fatal events and eliminate workplace hazards.

John Swagzdis, Senior Supervisor
 Electrical Instrumentation, Sierrita Operations

Fatality Prevention

FREEPORT-McMoRAN

#### SAFETY AND HEALTH SUMMARY DATA

Including Contractors					
	2010	2011	2012	2013*	2014*
Workplace Fatalities	2	5	6	35	7
Total Recordable Incident Rate	0.65	0.61	0.58	0.74	0.56
Occupational Illness Cases	6	16	25	41	46

<sup>\*</sup> Includes FM O&G

TRIR = [(Fatalities + Lost Time Incidents + Restricted Duty Incidents + Medical Treatment) x 200,000] / Total Hours Worked

reliable controls including engineered solutions. A specific fatality prevention training program for leaders incorporates sharing best practices across our operations, including implementation of the controls set forth for identified Global Significant Risks (GSR). All operations began training leaders in 2014 and the training is continuing throughout 2015.

In 2014, several reviews of our GSRs were conducted with subject matter experts from operations, maintenance and the safety function. The purpose was to set minimum policy requirements and identify potential gaps in existing guidelines or procedures. Reviews and subsequent improvement of GSR policies have been completed for circumstances regarding working at heights, open hole, lockout / tag out / try-out, shovel moves, blasting and industrial railroad activities. We also continue to learn from serious incidents that have occurred at other companies and have developed policies to set minimum standards to prevent a similar event at our Company. For example, we developed a shovel move policy following an event at another mining company's operation when a shovel rolled over a light vehicle during a move, resulting in a fatality.

Through these reviews, our learning included the identification of critical controls being used effectively at certain operations and sharing that knowledge to improve the reliability of controls at all operations. A critical control upgrade communication mechanism has been developed to facilitate effective sharing of critical control improvements across our businesses (substituting administrative controls for engineering controls, for example). Examples include

using robots in truck maintenance shops to remove and replace rims on haul truck tires. Implementing this technology removes the worker from a potentially harmful location should an accident related to tire pressure occur. We also are now building work platforms to set inside crushers when conducting work inside rather than relying on correct use of fall arrest systems.

A variance policy for GSRs will be issued to ensure the appropriate management reviews in those infrequent instances where it is not feasible to comply with a GSR control requirement or when



Members of the Morenci Slope Design and Stability group stand in front of a ground probe slope stability radar unit that continuously scans pit slopes. The team utilizes high-tech equipment, including extensometers and time-domain reflectometer cables, to monitor any movement of material that might indicate the potential for an unsafe condition.

## **2014 WORKPLACE FATALITIES**

**Including Contractors** 

Operation	Date	Event Description
PTFI Papua, Indonesia	January	A concrete mixer truck operator transporting a load of concrete from a surface batch plant to an underground construction project was killed when his truck overturned as it descended a steep section of the roadway.
Cerro Verde Expansion Project Arequipa, Peru	September	A subcontractor bus carrying contractor employees from the mine site to Arequipa ran off the road and rolled over. One contractor was killed.
PTFI Papua, Indonesia	September	A fatal injury to a contractor occurred at the haulage level in the underground operation when a ground failure occurred during the use of a jumbo drill. The jumbo crew was working under supported ground at the time of the failure when the jumbo was buried, and the contractor miner was killed.
PTFI Papua, Indonesia	September	A haul truck ran over a light vehicle at an intersection in the Grasberg surface mine. There were nine individuals in the light vehicle and four employees were killed.

compliance with a GSR control requirement may create a greater risk to workers. Variances are approved only where alternative controls can be demonstrated to provide equally effective protection, or where the risk has been reduced to the lowest level reasonably possible.

We are identifying proactive metrics or leading indicators of fatality prevention. The metrics will be used to drive process improvements by ensuring that the critical controls of high potential events will be properly managed. Such leading indicators to be tracked will include the number of critical control audits conducted for high risk tasks, percentage compliance with critical controls for high risk tasks audited, the number of critical control upgrades and the percentage reduction of high risks tasks performed.

In the wake of recent safety incidents at the PTFI operations, Freeport-McMoRan has undertaken a number of actions to improve workplace safety, including commissioning a third-party review of selected risk categories that could lead to events that could cause multiple fatalities. The review included an assessment of the degree to which those risk categories are currently being managed by assessing the quality of the controls in place, identifying instances where there were no controls in place for risk categories and indicating where current controls could be improved.

The risk categories reviewed included transportation risks (bus, tram, and Grasberg Block Cave shaft); geotechnical risks; fire risks (underground and in occupied surface buildings); and Deep Ore Zone underground mine haul truck risks. In all, 19 major accident hazards were examined and developed into 23 accident scenarios. The results of the review are being utilized to enhance ongoing critical control identification and implementation at PTFI.

# **OCCUPATIONAL HEALTH**

Freeport-McMoRan operations maintain comprehensive occupational health programs to assess the risk of exposure to occupational health hazards and implement adequate controls for the workforce. Our Field Guide for Occupational Health and Industrial Hygiene defines occupational exposure limits, standards and practices that apply globally. Every workplace job task includes an evaluation of physical hazards, as well as the potential consequences related to occupational illness. During 2014, our medical protocols were reviewed, expanded and standardized to assist with recognition and management of risks relevant to conditions such as heat stress; to evaluate fitness for duty;

and to track specific indicators for specific exposures such as silica and lead. We also have implemented a new software system that enables electronic management of data to expedite response to events and to monitor trends and patterns.

There were 46 occupational illness cases reported at our operations in 2014. These cases reflect the number of workforce members involved, not the number of exposure events which was significantly lower. One exposure event involving six employees occurred at a leach pad where exposure to gases including nitrogen dioxide occurred. In response, the use of personal monitors and controlled access have been implemented and additional measures have been introduced to test acids being used for leaching to determine their potential

> to contain residual or higher than optimal constituents that could result in undesirable exposure risks. These measures are now being implemented at all operations with similar leaching processes. We experienced six cases of heat stress primarily related to higher temperatures experienced at a number of operations and correct classification of the cases as heat stress as opposed to fatigue. We continue to conduct educational campaigns to promote proper hydration practices within the workforce. Other cases included hearing impairment, dermatitis and illness as a result of exposure to agents including acid mist.

Any injury or illness includes a root cause analysis and management actions to prevent reoccurrence.

# **AVIATION SAFETY UPDATE**

The safety of the

men and women in

member workforce

continues to be our

highest priority and

management team.

a critical focus of our

our over-80,000-

Following a global aviation review in 2012 and 2013, significant efforts have been undertaken to improve aviation safety associated with our operations, including a wide range of equipping, auditing and training initiatives.

Both TFM and PTFI air operations have achieved the Basic Aviation Risk Standard (BARS) Gold status after three years of BARS audits administered by Flight Safety Foundation. This third-party assessment measures our safety performance against the actual threats posed to aviation operations, particularly those that occur within challenging and remote environments. The audit directly links these threats to our associated controls, recovery and mitigation measures.

e are committed to the highest level of ethical and legal conduct. The Freeport-McMoRan Principles of Business Conduct are a commitment to integrity and define the expected behavior of all employees and our Board of Directors. We conduct comprehensive training on our Principles of Business Conduct, including annual certification of management-level employees (99 percent trained in 2014). This process consisted of computerbased training, as well as a signed certification that the employee understands the Principles of Business Conduct and is not aware of any cases of non-compliance. Principles of Business Conduct training is also provided annually to non-management employees on a rotating basis by geographic location. Of the approximate 12,400 employees selected in 2014, 95 percent completed the training. Training is also mandatory for all new hires.

#### **ANTI-CORRUPTION**

Corruption sometimes is widespread in local government systems and cultures near our operations, particularly in developing countries. We do not tolerate the offering or payment of bribes, kickbacks or other similar payments to any person or organization or government official to secure advantages for our business. Likewise, we do not accept any of these payments. Our Anti-Corruption Policy and Guidelines require compliance with the U.S. Foreign Corrupt Practices Act of 1977 (FCPA) and other relevant anti-corruption laws, including local laws.

The Company developed a new online anti-corruption training module in 2012. That training was last issued in 2013 to employees who regularly interact with government officials, at which time more than 2,280 employees at our global operations participated. In light of hiring a new third-party training provider, we have delayed roll out of our online anti-corruption training. This training will roll out along with our other new courses in early 2016. Going forward, completion of the anti-corruption training will be required annually. The online training is not meant to replace our existing classroom training programs; rather, it has been developed to supplement existing systems and extend the reach of the Company's overall compliance efforts. In the future, we will continue to broaden our training selection process to include additional employees within key departments and executivelevel groups who may interact with government officials, as well as support functions. This approach is expected to increase the number of employees selected for the training and provide a more consistent and automated selection process.

During 2014, we held in-person classroom training at Atlantic Copper, PTFI, Cerro Verde, TFM, FM O&G and for Exploration teams in Europe which consisted of key departments such as Government Relations, Operations and Logistics. Training also was conducted for support functions, including the Legal, Global Supply Chain, Sales and Marketing, Communications, Environmental

Services, Human Resources and Accounting departments along with senior management responsible for approval procedures and internal controls. In addition, classes were held for 105 contractors at PTFI. Principles of Business Conduct, FCPA and Fair Competition training was provided to the Climax Molybdenum and Sales Management teams.

In recognition of the potential legal liability that could result from actions of our business partners under the FCPA and other laws, the Company is implementing its online due diligence platform, the Freeport Compliance eXchange (FCeX). FCeX is a survey-based software platform designed to assess risk in the areas of anticorruption, international trade and human rights. FCeX launched as a pilot at PTFI, TFM and Cerro Verde during the first half of 2014, and was rolled out to the rest of our non-U.S. operations throughout the remainder of 2014. FCeX has significantly enhanced the Company's ability to identify, assess and mitigate compliance risks.

## **INFORMATION AND REPORTING**

Freeport-McMoRan maintains a Compliance Line to provide guidance and assistance to workforce members with any questions or concerns related to our Principles of Business Conduct. To encourage our workforce to raise any potential violations of business conduct, we also provide anonymous reporting through our compliance system with the exception of Spain in accordance with Spain's Data Protection Act (Organic Law 15/1999 on the Protection of Personal Data) which prohibits anonymous reporting. During 2014, 238 reports were made through the Freeport-McMoRan Compliance Line relating to various topics, including employee workplace conduct; environment, health, and safety; protecting Company assets; and conflicts of interest. All reports are investigated and, if substantiated, appropriate disciplinary action is taken including possible termination of employment.



Employees from PTFI's Environmental, Corporate Communications, and Security & Risk Management departments receive annual training on corporate ethics and the FCPA from PTFI Compliance Officer, Ingrid Pakpahan. This training is an integral part of the Company's global compliance program.

#### TRANSPARENCY OF GOVERNMENT PAYMENTS

In 2008, Freeport-McMoRan endorsed and committed to support the Extractive Industries Transparency Initiative (EITI), which is a commitment by governments to disclose revenues, and by oil, gas and mining companies to disclose natural resource payments to governments in order to advance transparency and accountability. A Company executive serves on the EITI International Board of Directors and other employees directly support in-country EITI processes.



DRC is an EITI compliant country and TFM engages in the process as a member of the country's EITI multi-stakeholder group. Likewise, our Cerro Verde operation participates in implementation of EITI in Peru, which is also a compliant country. The U.S. was accepted as a candidate country by the EITI International Board of Directors in March 2014 and Company representatives are active members of the U.S. EITI multi-stakeholder group. Our PTFI operations continue to directly participate and support implementation of EITI in Indonesia, whose candidacy is temporarily suspended.



TFM is one of the largest copper and cobalt producers in the DRC and an investment in the future of the country. The project provides a vital source of revenue for regional and national development.

The payments our Company makes to host governments via taxes, royalties and other obligations are a significant contribution to national, regional and local development. We believe that increased transparency of natural resource revenues and payments promotes better governance and accountability regarding the distribution of natural resource revenues. In addition to our country-level EITI commitments, our practice is to report annual material cash payments to governments, including sub-national payments, in all countries where we conduct business, as presented below.

# CASH PAYMENTS TO GOVERNMENTS<sup>a</sup>

For the year ended December 31, 2014 (\$ millions)	U.S.	Chile	Peru	Indonesia	DRC	Other Countries <sup>b</sup>	Total
Corporate Income Taxes, Net of Refunds	\$ 384	\$ 168	\$ 282	\$ 165	\$ 11	\$ 13	\$ 1,023
Withholding Taxes on Foreign Dividends		134		1			135
Employee Payroll Taxes	406	24	10	86	44	25	595
Dividends							
Royalties and Net Severance Taxes	369	39	23	118	32		581
Property Taxes	139	1		9		2	151
Other Taxes and Fees	434	28	150	159	95	4	870
Total	\$1,732	\$394	\$465	\$538	\$182	\$44	\$3,355

a. This schedule reflects a voluntary effort by Freeport-McMoRan to capture its cash payments to governments (net of refunds), including payments by FM O&G. Schedule includes sub-national payments.

b. Represents cash payments to governments by Freeport-McMoRan's other business groups that are located outside of the countries where Freeport-McMoRan conducts its primary operations.

e do not tolerate human rights violations, and our Human Rights Policy requires our Company and our contractors to conduct business in a manner consistent with the Universal Declaration of Human Rights. We promote human rights awareness through outreach and training to our employees, contractors and communities, and we protect anyone who reports suspected violations. We have established site-specific human rights policies and systems consistent with the corporate policy, in-country laws and regulations, and the Voluntary Principles on Security and Human Rights (Voluntary Principles). Our human rights compliance officers oversee compliance and training, as well as a grievance mechanism for reporting, documenting and following up on all human rights allegations that are reported in our areas of operations.

## **HUMAN RIGHTS PROGRAM UPDATE**

We continued to advance integration of the UN 'Protect, Respect and Remedy' framework and the supporting Guiding Principles on Business and Human Rights (UN Guiding Principles) into our business during 2014. Most notably, we worked with a third party to complete a corporate-level human rights impact assessment (HRIA) in line with the UN Guiding Principles. In order to prevent and mitigate adverse human rights impacts, the results of this assessment are helping us to integrate human rights considerations across relevant business functions and processes. The HRIA covered 28 of Freeport-McMoRan's mining and metals operations - encompassing those in Chile, DRC, Finland, Indonesia, the Netherlands, Peru, Spain, the UK and the U.S.

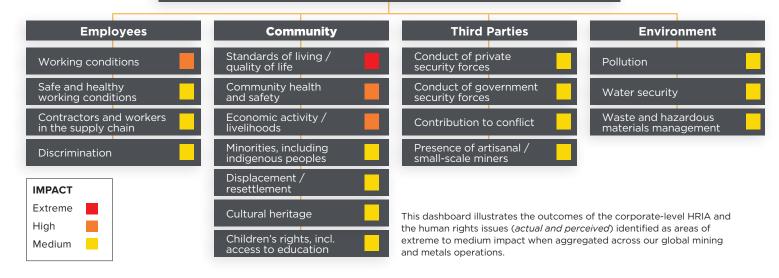
As part of the HRIA, Freeport-McMoRan conducted three international-level stakeholder verification meetings with representatives from academia, investors, business partners, NGOs and governments. We received input on the assessment's methodology and discussed findings. Key points arising from these meetings included the following:

- Operation-level HRIA: The need to build on the corporate HRIA through more targeted, operation-level HRIA activity focused on 'high risk/impact' operations - to ensure less 'visible' risks and impacts are captured.
- Non-recorded impacts: Some human rights impacts may not be reported (e.g. through operations' grievance mechanisms or official channels) for reasons ranging from lack of access to fear of retribution.
- Broader human rights dynamics: The incident-based approach used in the corporate HRIA may not capture broader background dynamics that should be factored into the overall picture of human rights impacts.
- Specific group perspectives/vulnerabilities: It could be useful to assess impacts via specific 'lenses' - e.g. from the specific perspective of women, minority groups, supply chain workers, marginalized groups or otherwise.

At the conclusion of the HRIA, the following main findings, which also aligned with stakeholder views, included:

- The Company's most significant potential human rights impacts globally are related to environmental and community issues.
- The greatest actual and perceived impacts are linked to community and employee-related issues.
- For both *potential* and *actual* impacts, the Company's operation in the DRC is its highest ranking site, followed by its operation in Indonesia.

# CORPORATE-LEVEL HUMAN RIGHTS IMPACT ASSESSMENT



As part of the corporate-level HRIA, we included an exercise to identify how the Company promotes and advances human rights. While understanding that positive human rights impacts cannot offset a negative impact, this assessment allowed us to capture a more holistic view of our overall human rights performance. It also allowed us to identify areas where we have opportunities to promote human rights. The assessment showed that human rights issues within communities are where we have our greatest positive impacts, which are largely supported through our social investment and community partnership programs.

As a next step, Freeport-McMoRan has commenced a site-level HRIA at its TFM operation in the DRC. This site-level process includes local stakeholder engagement by a third party (same consultancy that facilitated the corporate-level HRIA) and provides a mechanism for inquiring about and identifying any impacts not captured in the grievance mechanism, media reports, and stakeholder information used in the corporate-level assessment. Our site-level process, which is expected to be completed in the second half of 2015, is intended to assist TFM in prioritizing human rights issues where the operation can have the greatest impact.

Any confirmed impacts at the site-level which are not already addressed will generate action plans that will be incorporated into the site's existing sustainable development management systems. Based on lessons learned from this site-level process, the findings will further shape the Company's human rights strategy and approach as we consider possible gaps in our high-level corporate assessment and the possible implementation of assessments at other operations.

The HRIA process, including the related stakeholder engagement, helped the Company define updates to its Human Rights Policy. Approved by the Freeport-McMoRan Board of Directors in February 2015, the updated Freeport-McMoRan Human Rights Policy requires alignment of our human rights due diligence practices with the UN Guiding Principles. The revised policy also states that we will utilize human rights impact and risk assessments to prevent and mitigate human rights impacts at our operations. The policy upholds our previous human rights commitments, such as implementation of the Voluntary Principles on Security and Human Rights, but also highlights our commitment to expanded human rights issues and broadening our lens to identify human rights impacts, such as prohibiting human trafficking in our supply chain and respecting the rights of indigenous peoples and vulnerable groups.

#### **SECURITY**

The Voluntary Principles on Security and Human Rights serve as guidelines for our security and



human rights programs, interactions with host government police and military personnel, and with private security contractors.

## PT Freeport Indonesia

Security risks near our PTFI operations in Papua, Indonesia stem from the presence of in-migration, separatist activists in the region, presence of illegal gold panners in the project area, and social, political and ethnic tensions within the local community and in other areas of the province.

PTFI employs approximately 730 unarmed personnel and 260 unarmed private security and transportation and logistics contractors that perform functions such as protecting facilities, monitoring shipments of supplies and products, assisting in traffic control and aiding in emergency response operations. The Grasberg minerals district has been designated by the Government of Indonesia as one of Indonesia's vital national assets. This designation results in the police, and to a lesser extent, the military, playing a significant role in protecting the area of our operations. The Government of Indonesia is responsible for employing police and military personnel and directing their operations. PTFI has also established a Memorandum of Understanding (MoU) with the Provincial Commander of the National Police, which was last revised and signed in 2013. The MoU covers a 3-year term and details the working relationship between PTFI and the police, including areas of support, coordination and commitment to PTFI policies and procedures, including business ethics and human rights. The Voluntary Principles are included in the MoU. PTFI's share of support costs for the government-provided security was \$27 million for 2014 and \$25 million and \$22 million in 2013 and 2012, respectively. This supplemental support consists of infrastructure and other costs, such as food, housing, fuel, travel, vehicle repairs, allowances to cover incidental and administrative costs, and community assistance programs conducted by the military and police.

In 2009, a series of shooting incidents targeting company personnel, contractors and host government security personnel occurred within the PTFI project area, primarily along our remote access road and east levee. These shooting incidents have continued on a sporadic basis with the last incident occurring on January 1, 2015 resulting in the death of one PTFI security employee and two Mobile Brigade police. From the beginning of 2009 through January 2015, there were a disturbing 20 fatalities and 59 injuries to employees, contractor employees, host government security personnel, and civilians from shooting incidents within our project area. To date, no one person or group has claimed responsibility for the shootings and investigations by the Indonesian authorities remain ongoing.

#### Tenke Fungurume Mining

TFM currently faces a number of security and social risks, such as risks posed by illegal artisanal miners present on the concession as well as a rapid population influx of migrants looking for economic opportunities. TFM employs approximately 340 unarmed security employees and 725 unarmed private security contractors. In addition to these security personnel, the national government has assigned approximately 110 Mines Police to the TFM concession area. The Mines Police are a division of the Congolese National Police and are responsible for maintaining security in mining concessions throughout the DRC. Since 2008, TFM has been a party to a Memorandum of Understanding (MoU) with the Mines Police assigned by the state to maintain public security in the TFM concession area. The MoU details the working relationship between TFM and the Mines Police, including areas of support, coordination and commitment to TFM policies and procedures, including business ethics and human rights. The Voluntary Principles are incorporated by reference and included as an attachment to the MoU. TFM provides food, housing, medical services, supervised transportation, non-lethal equipment and monetary allowances as well as direct payments to the government for the provision of the security assigned to the concession area. The total cost to TFM for this support, including in-kind support, totaled approximately \$2 million in 2014 and less than \$1 million in 2013 and 2012.

Provision of support to host country security personnel in the DRC and Indonesia is consistent with our obligations under our agreements with the respective governments, our philosophy of responsible corporate citizenship and the Voluntary Principles. We facilitate host government security training on the Voluntary Principles and periodically review our support practices to ensure they are appropriate, lawful and properly controlled.



Superintendent of Human Rights Training at PTFI Luther Kogoya leads employees through a training session. The training emphasizes that all employees and contractors have a responsibility to report any human rights concerns or potential violations.

#### REPORTING AND ENGAGEMENT MECHANISMS

In 2014, 40 human rights-related allegations were reported to the PTFI Human Rights Compliance Officer compared to 34 in the prior year. Nineteen of these allegations were human resource cases, three were harassment cases, three were intimidation cases, two were discrimination and one was a community issue. There were also 12 cases related to domestic issues. All cases reported were documented, reviewed and closed, or are in the process of being followed up by the PTFI Human Rights Compliance Office.

In 2014, 34 human rights allegations were reported to and recorded by the TFM Human Rights Compliance Officer. This was an increase from 17 cases recorded in 2013 and may reflect further maturity and trust of the reporting system. Of the cases reported, 11 were cases of harassment, 10 were human resource cases, seven were physical assault, two were health and environmental cases, one was discrimination, one was property damage, one was a community issue, and one was a case of contract truckers using children to run errands and wash trucks at a truck stop. All cases were documented, reviewed and closed, or are in the process of being followed up by the TFM Human Rights Compliance Officer or investigated by government authorities.

Seven of the allegations at TFM were made against security employees or host government security personnel. One case involved a security employee who alleged he was physically assaulted by colleagues for not supporting a criminal activity (theft of ore). The other six cases involved community members who alleged that they were physically assaulted, mistreated or had property seized by members of the Mines Police. Six of these cases were closed (five of them reported to the local Police as a criminal matter for further investigation) and one of them was concluded as unsubstantiated.

TFM also experienced a number of violent security incidents related to illegal artisanal mining occurring in its concession during 2014. There were five incidents recorded in 2014 which together resulted in the deaths of one member of the National Police and three illegal miners, and non-life-threatening injuries to two illegal miners. Notably, four of these incidents took place in areas near our operations, while one took place in the town of Tenke. In each of these cases, TFM called for an official investigation; however, in most cases, no response was received or the case status has been reported as still in process. TFM also engages with local Congolese human rights NGOs to keep them informed and help call for transparency. In one case, TFM engaged with MONUSCO, whose Human Rights Team had arrived at site to prepare for an upcoming training, and investigated a fatal event involving an illegal artisanal miner.

For more information on our Human Rights programs, please see our Voluntary Principles on Security and Human Rights 2014 Report to the Plenary on our website.

e recognize that our operations have economic, social and environmental impacts on local communities throughout a project life cycle. Some of these impacts include land use change and population influx, while others include economic opportunities and development in the areas of infrastructure, health and education. We engage openly and transparently with local stakeholders to facilitate our ability to operate and grow our business. Our Community Policy calls for collaboration with communities to minimize and mitigate adverse impacts and cultivate opportunities to maximize benefits.

Engagement and consultation ensure communities have input into our development and operating projects and promotes a better understanding of our business operations. Dialogue with local stakeholders occurs formally through open houses and regulatory processes, but also through interactions with our community development representatives in the field, community partnership panels and community investment foundations.

Our operations use a community grievance management system for recording, processing and responding to community concerns. Approximately 580 community grievances were recorded at worldwide operations during 2014, of which over two-thirds were related to resettlement at TFM. An Independent Mediation Committee (IMC) is maintained at TFM independently and impartially resolve grievances. Mediation occurs only if the complainant is not satisfied with TFM's resolution to the initial grievance recorded through the grievance system and the complainant requests the grievance be presented to the IMC. In 2014, the IMC received 76 cases, of which 46 were resolved (related to community resettlement, property damage and employment) and the remaining 30 are in process.

## **COMMUNITY INVESTMENT**

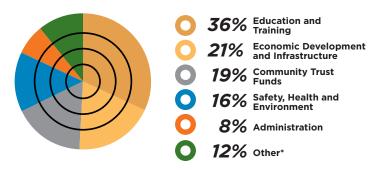
Freeport-McMoRan's community investment strategy addresses high-priority needs and facilitates local capacity building to sustain communities post-closure. Our social investment criteria is a set of guidelines designed to ensure that resources are used effectively by decreasing community dependencies on our operations and ensuring that we enter into partnerships that support sustainability.

In addition to direct community investment from operations and the corporate Freeport-McMoRan Foundation, we have established community trust funds or social funds in Chile, the DRC, Indonesia and the U.S., which are managed by community members who determine the allocation of funds to programs that focus on education, health and economic development. Contributions to the PTFI Partnership Fund were over \$31 million in 2014 and \$634 million since its inception in 1996. Our six community investment funds in North America contributed almost \$3 million to community-directed projects during the year.

During 2014, we continued our support of quality improvement in science, technology, engineering and mathematics (STEM) education

#### **2014 COMMUNITY INVESTMENT**

\$198 million



\*Includes arts, culture, heritage, resettlement and employee programs such as Matching Gifts and United Way.

through teacher development and retention initiatives, programs to spark student interest, and efforts that helped to strengthen the STEM education systems, all with the goal of improving student achievement and preparing them for college and careers. We also invested significantly in higher education programs that trained students in the trades as well as 4-year degree programs related to our business needs. Our focus on STEM is aligned with the longterm technical requirements of our business, as well as environmental education opportunities available at most of our operations. We also have advanced our investments in women's economic empowerment programs, such as "Dreambuilder-Women's Business Creator," an online entrepreneurship skills training program that has reached more than 3,600 women in Latin America with more than half from our communities in Chile and Peru. Impact evaluation of the first group of graduates 8-10 months after graduation indicated that 68 percent increased sales, 42 percent were able to expand and hire new employees, and 71 percent now paid themselves a salary versus only 13 percent who did so before participating in the program. The



As part of Cerro Verde's work to improve water infrastructure within the Arequipa region, in 2014, it completed the reconstruction of floodgates on the Rio Chili. The new floodgates replaced antiquated infrastructure and help maintain the integrity of regional agricultural irrigation systems during severe precipitation events.

English version of the program was developed throughout 2014 and launched in early 2015 with a goal of reaching at least 2,500 women in the U.S. Other empowerment initiatives include an agricultural training program in the DRC in partnership with Women for Women International, as well as PTFI's assistance of Kamoro women through a cooperative that supports income-generating activities.

#### **INDIGENOUS PEOPLES**

Our community engagement and local investment objectives are significantly focused on indigenous peoples in Papua, Indonesia; Native Americans in the United States; and the communities of Alto Loa in Chile (Chile's First People). Through community engagement, cultural promotion and preservation projects, and training and development programs, we seek to address the needs, cultures and customs of indigenous peoples near our operations. Engaging with groups focused on indigenous peoples' rights at the local, national and international levels is also important for two-way sharing of information about approaches to indigenous peoples topics in varying geographies.

In 2014, PTFI recorded 24 formal grievances from members of the indigenous Papuan community, including claims over land use, alleged new land rights being challenged and compensation requested for past land use agreements. PTFI receives and handles community grievances through its Community Grievance Management System and complies with Indonesian laws regarding land and customary rights. In response to land rights grievances, PTFI coordinates with local authorities to investigate the claim and works with all parties to try to reach an agreement within the existing legal framework. In 2014, PTFI supported the Amungme tribal council (LEMASA) in conducting a land rights mapping study in three highland villages in cooperation with Cenderawasih University Faculty of Law and Anthropology Department based in Jayapura, Papua. An initial stage



In 2014, El Abra partnered with a renewable energy developer to install 1,500 photovoltaic panels (left) and a wind turbine in the indigenous community of Ollagüe, Chile. Prior to the project the community relied solely on electricity from diesel generators. A traditional Quechua "Payment to the Earth" ceremony (right) is performed to give thanks for the project.



In response to grievances from Kamoro communities related to sedimentation in the Ajkwa estuary, PTFI has provided a 50 passenger boat to provide regular water transportation services for coastal villages to healthcare, education and economic trade in the Timika area.

of this study has been completed and the results are intended to assist the Amungme, the government, and PTFI in mediating land right

In November 2014, approximately 300 residents from the Kamoro village of Nawaripi blocked PTFI workers from carrying out extension work on the West Levee. They claimed that PTFI's operations were impacting river access ways and requested monetary compensation, business and employment opportunities, as well as houses and public facilities to be constructed for them. PTFI Community Liaison Officers and the PTFI Tailings and River Management Project Department met with the Nawaripi residents to discuss their grievances and assess the impacts. After reviewing the situation together, PTFI agreed to provide in-kind assistance, including construction of a jetty, support for economic development programs, and organization of a traditional ceremony in respect of the cultural heritage of the affected community. PTFI is continuing discussions with the community for an amicable long-term solution.

In Chile, our El Abra operation engages regularly with 10 indigenous communities, and the operation has established an Agreement of Cooperation with the Community of Conchi Viejo whose town is located between the plant and the mine. During 2014, we considered additional, formalized engagement, assessment and management systems to effectively address social impacts and community development topics within the corridor surrounding our operation near Calama, Chile, where we have a future expansion opportunity. Coupled with the Freeport-McMoRan Chile Foundation for social investment, we anticipate significantly increased strategic stakeholder engagement and community development activities in Chile in 2015.

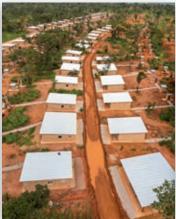
In the U.S., we continued engagement with Native American tribes in 2014. Education has been identified as a priority issue for our partner tribes, and our Native American Scholarship program awarded 36 college scholarships to members of the Hualapai, San Carlos Apache,

Tohono O'odham and White Mountain Apache tribes during the year. We also contributed over \$290,000 through our designated Native American Partnerships Fund to initiatives including the Tohono O'odham Farmer-Gardener Economic Development project, which sought to expand economic activity by capitalizing on local natural resources, cultural traditions and social enterprises, and the United National Indian Tribal Youth (UNITY) National Conference, which provides training, technical assistance and enrichment activities to over 1,250 Native youth on an annual basis.

#### **TFM COMMUNITY RESETTLEMENT**

Due to the expansion at TFM, accessing new land results in impacts to farmland and households, and in many cases economic and/or physical displacement cannot be avoided. TFM maintains a Land Access, Compensation, and Resettlement Policy Framework (available on our website) that sets out the principles, procedures, entitlements, eligibility criteria and organizational arrangements governing TFM's compensation for involuntary resettlement impacts. The framework, along with TFM's other commitments to displaced households and communities, was developed in alignment with DRC law and the International Finance Corporation (IFC) Performance Standards.

TFM follows a transparent, multi-step participatory process where all project-affected households are fully engaged and fairly compensated to ensure that their living standards are improved or at least restored to pre-project conditions. For each phase of resettlement, TFM conducts a comprehensive socio-economic baseline and census, and then prepares a Resettlement Action Plan (RAP). Each community-specific RAP identifies all economically and physically impacted households, whose displacement is unavoidable, within a clearly identified footprint. These impacts are then mitigated via cash compensation and/or replacement of assets, and restoration of livelihoods.





As part of its Resettlement Action Plan, TFM engages with consultation committees comprised of village chiefs, elders and traditionally underrepresented community members including women and youth (right, New Mitumba Consultation Committee). Phase one of the New Mitumba resettlement (left), which included construction of new homes for 40 households and a school, was completed in 2014.

Planning for the resettlement process linked to the Oxide Project expansion advanced in 2014, with a particular focus on the compensation and physical resettlement of the Bloc Mitumba community located near the Fungurume Hills mining area and Fungurume town. The Mitumba-Fungurume Hills RAP impacts approximately 1,240 households that will be physically or economically displaced, of which 324 are entitled to resettlement housing. Physical resettlement was initiated in 2014 with the first 40 households resettled in the New Mitumba resettlement site. An additional 20 households who opted for cash compensation were resettled in privately acquired residences in Fungurume, Lubumbashi and Likasi. The physical resettlement process is scheduled for completion by the end of 2015.

A cash compensation option was created to respond to the more urban and transitory character of the Bloc Mitumba community, and as an alternative for households who already own a home or prefer to build or buy a home. The TFM Resettlement Unit directly supports and monitors households throughout the process to ensure that replacement houses are constructed or acquired and improved to an acceptable standard and with security of tenure. This cash option increases the range of choices available to eligible households and provides an opportunity to use cash compensation to leverage livelihood opportunities and improve their well-being more sustainably than they may have through the receipt of a residence they may or may not intend to use.

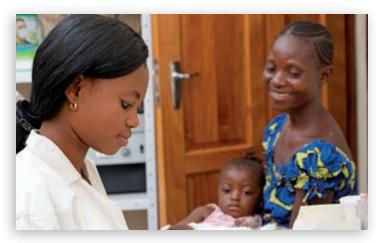
Close monitoring of resettled households will continue during and after resettlement to monitor program effectiveness and the wellbeing of resettled households. The TFM resettlement program undergoes an annual external review as part of the program's monitoring and evaluation.

#### **PUBLIC HEALTH**

We operate in some parts of the world that lack clean water and sanitation, and have populations with low levels of health education, awareness and access to adequate health services. Malaria, HIV/ AIDS and tuberculosis (TB) are serious infectious diseases impacting communities near our operations in Indonesia and the DRC, including members of our workforce. In coordination with local governments and NGOs, we dedicate significant resources to helping communities and governments reduce public health risks.

## Tenke Fungurume Mining

Before TFM began operations, malaria was the largest cause of morbidity in the area and placed a significant social and economic burden on the wider community. TFM implements an integrated malaria control program to protect the workforce, as well as the community residing within the concession - the first of its kind in the DRC. An indoor residual spraying program, aimed at targeting all accessible households in the concession, consists of two spray rounds



Patients receive care at the interim referral hospital, built as a joint partnership between TFM and the Fungurume Health Zone. The facility serves a population of approximately 130,000.

per year with more than 205,800 rooms/structures sprayed during the 2013-14 rainy season. In 2014, 573 malaria cases were diagnosed and treated among the workforce, representing an overall reduction in total workforce malaria incidence of 80 percent since the start of the program in 2008.

Improving access to clean water is critical to improving local health and living standards. Since 2007, 119 water wells have been constructed in and around TFM's concession, including six in 2014. During the 2013-14 rainy season, a cholera outbreak occurred in the TFM concession resulting in 203 cases of cholera and 10 deaths. Despite efforts to increase access to potable water, and not having had a cholera outbreak since 2009, high population influx into the area resulted in people collecting water from an unsanitary river. In response to the outbreak, TFM supported the local government to establish an isolated cholera treatment location, provided cholera diagnostic and treatment kits and supported the transport of medical supplies provided by the Provincial Ministry of Health to the impacted area. TFM also donated chlorine to the government to support chlorination of shallow and unprotected wells in the area. No cholera cases have been reported in the TFM concession for the 2014-15 rainy season, and programs are underway for increasing access to potable water in sprawling urban areas that pose high risk.

As part of the USAID Emerging Pandemics Threats Program, tools were developed to address infectious disease risk management through collaborative dialogue and formulation of health strategies to mitigate these threats in collaboration governments and extractive industries. In 2014, TFM participated in field testing these tools,

including hosting a site visit where health experts met with site management to review and discuss existing practices, practicality and feasibility of using the tools and implementing the suggested mitigation measures. The program was timely in supporting best practice in TFM's preparedness planning for infectious disease outbreaks, such as Ebola.

## PT Freeport Indonesia

The PTFI Community Health Department, supported by the company's medical services provider International SOS, implements programs for education, prevention, counseling, diagnosis and treatment of diseases within and around the project area. In addition to the approximate \$7.8 million invested in community public health programs by PTFI in 2014, LPMAK contributed almost \$15.4 million to community health care programs. This included the operation of community hospitals in Timika, in the lowlands, and Banti, in the highlands, as well as implementation of a comprehensive public health program addressing HIV/AIDS, TB, malaria, mother and child health, and clean water.

Papua Province has seen a rapid increase in the HIV prevalence rate in the past four years from 157 per 100,000 people in 2011 to 359 per 100,000 people in 2014, nearly 16 times more than the Indonesia national prevalence rate (23 per 100,000 people in 2014). The HIV/AIDS epidemic in Papua is predominately characterized by heterosexual transmission, especially impacting the indigenous Papuan population. PTFI implements a number of HIV/AIDS prevention, outreach, and treatment programs for employees and community members. In 2014, PTFI conducted HIV/AIDS education and outreach activities reaching over 14,000 community members and 9,100 employees, distributed condoms and conducted over 700 one-onone counseling sessions with commercial sex workers.

PTFI also increased HIV/AIDS Voluntary Counseling and Testing (VCT) services for the workforce by offering VCT for anyone receiving a checkup unless they opt out. In 2014, approximately 21,000 employees and contractors participated in VCT, an impressive increase from 3,400 employees in 2011, and 69 new cases were detected. Due to PTFI's efforts to increase VCT uptake, PTFI is diagnosing HIV cases at an early stage and before complications arise. Antiretroviral therapy is provided for HIV positive cases among PTFI's workforce and community members by the Indonesian government. This early diagnosis not only gives individuals with HIV an opportunity to receive treatment and lead a healthy life, but also helps to prevent transmission of HIV to others.

#### **ARTISANAL MINING**

Artisanal and small-scale miners have limited equipment and expertise at operating in hazardous conditions and can create social and environmental impacts, as well as placing their own health and safety at risk. These risks pose a challenge for the mining industry globally, and companies are identifying means to manage the associated security risks and create economic alternatives for illegal miners, or in some cases, where health, safety and environmental conditions can be regulated, develop means for formalizing artisanal mining. We recognize that no single solution will entirely address the issue as long as there is unemployment, poverty and buyers for illegal products. However, we believe that a multi-pronged approach comprised of security risk management, stakeholder engagement and socio-economic development for alternative livelihoods is essential.

#### PT Freeport Indonesia

PTFI uses controlled riverine tailings management to transport tailings to a designated area in the lowlands and coastal zone, called the Modified Deposition Area (ModADA). Thousands of illegal artisanal miners pan for gold in the Otomona River system (downstream of the mill) within the project area. The artisanal miners include local community members, but the majority are from outside the region.

One of the greatest risks from illegal gold panning is the potential use of mercury. PTFI monitors regularly for mercury use via routine environmental monitoring programs, and mercury has not been detected above natural background levels in the river ecosystem. PTFI also maintains a continuous air mercury monitoring system in the town of Timika. Since 2010, mercury continues to be detected at elevated levels in parts of the town where gold shops are present. Due to these monitoring systems and educational outreach, PTFI believes the risk of mercury use in the river system has been significantly reduced. Community Liaison Officers (CLOs) are routinely in the field to socialize the health and safety risks of artisanal gold panning.

Another risk associated with artisanal mining is an increase in the number of conflicts between gold panners and others who support this complex network of activities. PTFI began working with a third party in 2014 to help support stakeholder engagement efforts with the illegal gold panners. This organization also has conducted an update to the 2012 baseline survey on panning in both the highland and lowland areas. Given the sensitivity of illegal artisanal mining under Indonesian law and the associated risks, PTFI recognizes the importance of a neutral third party in helping to establish better information gathering and two-way communication.

PTFI is working with the local government and relevant institutions to find alternative livelihoods. For local community members, village-based economic development programs, including coffee and

cocoa cooperatives, are current areas of work, and the introduction of vegetables and other fast-growing crops through intercropping methods to boost income is another near-term opportunity.

## Tenke Fungurume Mining

Artisanal mining is widespread throughout the DRC and occurs illegally on the TFM concession, which is designated for industrial mining. Near-surface high grade ore is present throughout the concession and artisanal miners dig underground adits and tunnels to access ore deposits using rudimentary tools and with no protective gear. Working conditions in artisanal mining areas are treacherous, and the risk of landslides, collapse and the burial of miners are particularly high during the rainy season. In 2014, an incident of one illegal miner killed in a landslide activity within the TFM mining concession was reported. TFM suspects that there could be more cases of illegal miner fatalities, but they are not reported to TFM or the local authorities due to the illegal nature of the activity and fear of arrest or closure of access to open deposits and tunnels.

New arrivals, mostly young men driven out of other artisanal mining areas, are drawn to the TFM mining concession (and other mines in the area) by the possibility of economic opportunity. High levels of influx and associated illegal mining create tensions and social conflicts in the community, such as increased crime. In 2014, TFM launched a partnership with Search for Common Ground (SFCG) to engage community stakeholders around issues including illegal mining, security and human rights, and social cohesion using various communications strategies. As a first stage of the project, SFCG conducted a baseline survey to identify the main socio-economic tensions issues in the concession, including local views on illegal mining. In partnership with SFCG, TFM hopes to create a forum for constructive dialogue with community members on the conflict issues in the area. Similar to the situation in Indonesia, we believe that third-party support is important for helping us engage around sensitive conflict issues.

As TFM expands operations to additional deposits within its concession, the likelihood of encountering illegal mining activity will increase. TFM continues to engage with the DRC authorities to operate control measures at the entry and exit points of the concession to interdict shipments of illegal ore, and to implement mobile security monitoring. TFM CLOs conduct awareness campaigns to educate the community on the risks associated with illegal artisanal mining activity. TFM's long-term strategy continues to be support for economic development and job creation in the region to provide communities with alternative opportunities for income generation. TFM has prioritized agriculture development as an area of support and is also developing an Integrated Development Zone in the concession with the goal of attracting other businesses to the area to help stimulate job growth.

he Freeport-McMoRan Environmental Policy is based on our objective to be compliant with laws and regulations and to minimize environmental impacts using risk management strategies based on valid data and sound science. It requires that we review and take account of the environmental effects of each activity, whether exploration, mining or processing; and that we plan and conduct the design, development, operation and closure of each facility in a manner that optimizes the economic use of resources while reducing adverse environmental effects.

All of our mining and mineral processing operations maintain Environmental Management Systems (EMS) certified to ISO 14001, which are independently audited on an annual basis. During 2014, we completed internal environmental audits at 14 operations, and our facilities are routinely inspected by regulatory agencies. Since 1996, an independent environmental audit has been conducted at PTFI every three years, and an executive summary and responses to the 2014 audit recommendations are posted on our website. All operations have corrective action programs associated with the overarching EMS.

When operations receive an environmental violation from a regulatory agency such as shown in the table below, the citations typically relate to brief and minor exceedances of permit conditions or other recordkeeping violations which have no or minimal environmental impact. Notices of violation may also follow spills or releases related to tailings dust or impacted water. The increase in NOVs from 2012 to 2014 are partly attributable to notices received at Cerro Verde relating to a range of administrative-related findings that are not related to potential releases or threats to the environment. Where our operations have been assessed for penalties, they typically are individually below \$100,000.



The Morenci mill expansion in Arizona commenced operations in May 2014. As part of the project, high efficiency ball mills and a hydraulic roll crusher were installed, allowing for the processing of higher volumes of ore with up to 25 percent more energy efficiency than other crushing circuits in the industry.

## **ENERGY MANAGEMENT**

Our copper mining operations require significant energy inputs, principally diesel, purchased power, coal and natural gas, most of which is obtained from third parties under long-term contracts. For the year 2014, energy represented approximately 20 percent of our consolidated copper production costs.

In 2014, our worldwide total greenhouse gas (GHG) emissions, measured as carbon dioxide equivalent emissions, were relatively unchanged from 2013 at approximately 9.5 million metric tons divided between direct (55 percent) and indirect (45 percent) emissions. Reductions in emissions associated with the sale of Candelaria and Ojos de Salado were offset by significant production expansion projects at Morenci and Cerro Verde. Year-to-year our direct emissions are primarily from fuel combustion in haul trucks, followed by the combustion of fuels to provide energy for roasting, smelting and other processes. The majority of our mining activity occurs in open pits. As an open pit matures, haul road length increases and haul trucks are required to move ore additional distances to the processing facility. While the amount of waste

# ENVIRONMENTAL COMPLIANCE INDICATORS

2010 2011 2012 2013 2014 Reportable spills or releases of hazardous or toxic chemicals Notices of Violations related to permit exceedances, spills, 10 releases or other compliance matters Environmental Penalties\* \$83,420 \$75,000 \$47,369 \$80,362 \$123,745

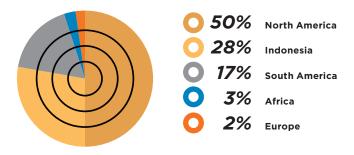
<sup>\*</sup> Penalties are typically paid in periods subsequent to the year of the environmental event and/or enforcement action.

material moved fluctuates year to year, the haul distances are also increasing. When market conditions necessitate the mining and processing of lower grade ore, haul trucks must move more material per pound of processed metal.

Indirect emissions are primarily those emitted by our electricity providers. In 2014, approximately 64 percent of our purchased power was from low carbon sources, including natural gas or renewable energy. Crushing, milling, pumping and electrowinning are the most significant power-consuming processes at our facilities. We have achieved significant improvements in energy efficiency with our new processing facilities, including new mills at Morenci and Cerro Verde. Nevertheless, the efficiency gains do not warrant comprehensive replacement of currently operating equipment at other milling facilities because that option cannot be economically justified.

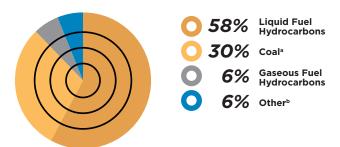
## 2014 TOTAL (SCOPE I and II) CARBON DIOXIDE **EQUIVALENT EMISSIONS**

By Region



# 2014 DIRECT (SCOPE I) CARBON DIOXIDE **EQUIVALENT EMISSIONS**

By Fuel Type



- a. Associated with the self-generating coal-fired power facility at PTFI.
- b. Emissions from non-energy consumption processes including leaching of calcite-containing ore, lime manufacturing, iron removal and refrigerants.

We have been investing more than \$10 million annually into energyrelated research and development through our technology center, technical services and operational improvement groups. We also participate in utility demand side efficiency programs and support renewable energy standards when feasible, such as providing miningrelated property for solar power generation. Efficiency achievements over recent years include:

- Deployed proprietary alternative anode technology to reduce energy required in producing electrowon copper;
- Used excess process heat from the sulfur burner at our Safford mine in Arizona to generate up to 15 megawatts (MW) of power for continuous use at mine processing operations;
- Provided mining-related property for a combined 20 MW of solar power generation in Arizona;
- Implemented High Pressure Grinding Rolls, the first application in the global copper industry, resulting in a greater than 15 percent reduction in grinding energy requirements;
- Installed high-efficiency ball mills and a hydraulic roll crusher to process higher volumes of ore at our U.S. flagship Morenci operation in Arizona, resulting in an approximately 25 percent more energy-efficient crushing circuit;
- · Developed an approach to achieve energy-efficient blasting and downstream crushing and grinding operations; and
- Maintained ISO 50001 certification at our Atlantic Copper smelter in Spain for its energy management system.

Our mining operations are currently not located in jurisdictions where there is a direct cost associated with our GHG emissions. However, from a medium and long-term perspective, we may experience increased costs relating to our GHG emissions for mining as a result of regulatory initiatives in the U.S. and other countries where we operate. In addition, the cost of electricity and other inputs that we purchase may increase if our suppliers incur increased costs from the regulation of their GHG emissions. We have modeled a hypothetical carbon tax of \$50 per metric ton on 2014 total GHG emissions (Scope I and II) associated with our global copper mines. The associated hypothetical increase in operating costs would not necessitate operating plan changes as it is similar to possible fluctuations in mined ore grades. Applying this model to our forecasted emissions profile and five-year copper production plans does not alter our current operating pans.

We have received independent verification of our GHG emissions inventory for years 2007-2014.

#### WATER SUPPLY AND MANAGEMENT

Our mining operations require significant quantities of water for mining and ore processing, and most of our operations in North and South America are in arid regions. We used approximately 1,325 million cubic meters of water in our operating processes in 2014, of which approximately 79 percent was recycled water. The majority of our recycled water originates from reclaimed water capture at tailings storage facilities and leach pads. Our reported overall water use, including recycled water, increased in 2014 due to the inclusion of our Arizona mining operations in our 2014 water data. We expect our absolute water use to increase in the future as we continue to advance brownfield growth projects.

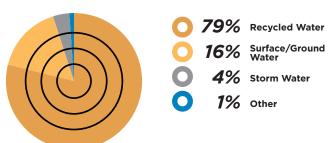
Mining operations in arid regions use operational-based water models to understand water use, recycling opportunities and operational losses such as evaporation. Through this process we have identified additional operational practices where recycled water is being used that was not quantified in prior reporting, which in turn has contributed to the overall increase in percentage of total recycled water use.

Although the potential physical impacts of climate change on our operations are highly uncertain, operations in arid regions also conduct annual scenario planning to evaluate hypothetical reductions in total water availability and hypothetical extreme precipitation events. Our water management includes identifying actions to help us adapt our operations to possible water shortages or surpluses.

Access to sufficient quantities of clean water is a critical concern of many, from governments to communities to agricultural and industrial entities. We explore mutual opportunities with stakeholders as we continue to make long-term investments in water supply projects to support our operating and growth plans. For example, water for our Cerro Verde mining operation in Peru, which lies within an arid region, comes from renewable sources through a series of storage reservoirs on the Rio Chili watershed. These reservoirs collect water primarily from seasonal precipitation and support communities, agriculture and mining interests. As the mine progresses towards completing the installation of its new concentrator

# **2014 WATER USE BY SOURCE**

1,325 Million Cubic Meters





In July 2014, Climax Molybdenum's state-of-the-art water treatment facility began operations to treat up to 14,000 gallons per minute from the Mayflower Tailings Storage Facility. The treated water is discharged into Ten Mile Creek, which supports local fisheries and recreation areas in Summit County, Colorado.

it is constructing a municipal wastewater treatment plant for the city of Arequipa. Cerro Verde has obtained authorization to reuse treated wastewater at an annual average rate of 1 cubic meter per second for ore processing. The wastewater treatment plant is expected to improve regional water quality, reduce waterborne illnesses and enhance the value of local agricultural products while providing supplemental water for an economically important project for the region.

During 2014, the Company executed new water lease options to store renewable surface water supplies at underground recharge facilities within Arizona for future use in support of existing mine operations, drought backup or to support future mine expansions. The Company has also applied for additional allocations of renewable surface water in Arizona (Central Arizona Project allocations) and has received a preliminary recommendation from the state's water agency supporting a water allocation. This process requires a federal environmental review which is expected to be completed during 2016.

## **TAILINGS AND WASTE ROCK**

The waste rock (including overburden) and tailings that we produce represent our largest volume of waste. Managing the volume of waste rock and tailings produced in our mining operations presents significant environmental, safety and engineering challenges. In 2014, we produced approximately 380 million and 180 million metric tons of waste rock and tailings, respectively. The primary risks associated with managing waste rock stockpiles and tailings relate to structural stability, geochemistry, water quality and dust generation. Management of this waste is regulated in the jurisdictions where we operate, and our programs are designed to be in compliance with applicable national, state and local laws, permits and approved Environmental Impact Studies.





At the Maurujaya Reclamation and Biodiversity Research Center (left), located on a retired tailings deposition area in the lowlands, PTFI collaborates with government agencies and universities to research reclamation techniques. The center also serves as a world-class location for environmental education.

Freeport-McMoRan currently operates 17 tailings storage facilities (TSFs) and manages 52 TSFs that are inactive or have been fully reclaimed. At our Cerro Verde operation in Peru, we advanced construction on the starter dam of what will be one of the largest TSFs in the global mining sector, with a targeted capacity to retain approximately 2 billion metric tons of tailings material. In connection with completion of the mill expansion at our Morenci, Arizona operation in 2014, we increased the operation's TSF capacity by approximately 568 million metric tons.

At the operational level, TSF stability is managed by qualified internal engineers at our operations and reviewed by qualified external Engineer(s) of Record (EORs). We follow established operations, maintenance and communication protocols. In this process, we regularly inspect and monitor phreatic level trends, deposition plans, water management controls, seepage management, decant systems and other stability components. In addition, we periodically review as-built insitu conditions through field and laboratory geotechnical testing programs.

At the corporate level, TSF stability is managed through our Tailings Stewardship Program, which includes a multi-disciplinary group of internal and external experts, the Tailings Stewardship Team (TST), who evaluate the design, operation and maintenance of our TSFs to ensure that we are following good stewardship practices. In 2014, our TST conducted annual field inspections at 17 active and 20 inactive TSFs. We also seek the advice of Technical Review Boards, which are comprised of internationally recognized experts retained by us, regarding our EORs' design and analysis, as well as our management of dam stability to ensure alignment with industry best practices. Following the August 4, 2014 tailings dam failure at the Imperial Metals-owned Mount Polley Mine in British Columbia, which was one of the largest tailings slurry spills ever recorded, our internal tailings experts reviewed publicly available information, including

the Independent Expert Engineering Investigation and Review Panel's post-failure report published in January 2015, and confirmed that the processes and systems under our Tailings Stewardship Program are aligned with current state-of-the-practice and the Panel's recommendations.

PTFI's controlled riverine tailings management system, which has been approved by the Indonesian government, uses the unnavigable river system in the mountainous highlands near our mine to transport tailings to an engineered area in the lowlands where the tailings and natural sediments are managed in a deposition area referred to as the ModADA. Levees have been constructed to laterally contain the footprint of the tailings and to limit their impact in the lowlands. The ModADA Management Board (MMB) is a multi-disciplinary expert panel that meets on-site approximately twice each year to assess performance and risks associated with the ModADA and coastal zone area. The MMB focuses on the structural integrity of the levees and the geochemical stability of the deposition area, as well as associated stakeholder engagement. PTFI also hosts a Tailings Management Communication Forum, comprised of government stakeholders, academia and NGOs, which convenes periodically to discuss PTFI's controlled riverine tailings management system and associated opportunities, including tailings utilization programs.

At TSFs located in arid regions, our tailings management program includes measures to reduce fugitive dust emissions from the surface of tailings impoundments, and increase reclaimed water capture to reduce freshwater consumption. Our efforts to limit dust generation include the application of magnesium chloride, polymers, watering and wind fencing.

Waste rock and overburden are managed in stockpiles for possible future mineral recovery, reclamation or other projects. These stockpiles are regularly monitored and evaluated for structural stability in accordance with local seismic design criteria. At PTFI, overburden stockpiles are subject to erosion caused by the large



The natural colonization of tall reeds (Phragmites karka) on the western boundary of the 230 square kilometer ModADA

amounts of rainfall in the region (average annual rainfall is 200 inches). The eroded stockpile material is eventually deposited in the tailings management area in the lowlands. This additional material, while predicted in our environmental studies, influences both the amounts and timing of deposition of finer tailings material in the estuary.

#### **BIODIVERSITY**

We are committed to identifying the impacts of our operations and, where practicable, implementing actions that conserve and enhance biodiversity. All operating mines have developed biodiversity management plans and Land Management Plans (LMPs), with the assistance of our corporate Biodiversity Task Force. Biodiversity management plans identify potential biodiversity projects through a process that includes landscape-scale habitat inventory, assessment of biodiversity risks (linked with the operation's Environmental Management System), identification of biodiversity opportunities and prioritization of projects. The plans generally consist of voluntary projects conducted in partnership with stakeholder groups, including government agencies, academic institutions and NGOs. LMPs provide the mechanism through which biodiversity considerations are incorporated into the site-specific planning process to minimize adverse impacts to biodiversity where practicable. LMPs consist of data overlays that illustrate the location and extent of significant biodiversity resources within and adjacent to mine sites.

As of December 2014, 13 Freeport-McMoRan sites were certified by the Wildlife Habitat Council's (WHC) Wildlife at Work program, which recognizes activities that create, conserve and restore wildlife habitat on corporate lands. Six sites were certified by the WHC Corporate Lands for Learning program, which recognizes activities to promote environmental education and outreach initiatives in local communities. PTFI received the prestigious Corporate Lands for Learning of the Year award for outstanding conservation education, stewardship and voluntary employee efforts. In addition, WHC, together with Bat Conservation International (BCI), honored Cerro Verde with the Bat Conservation Action award, which recognizes programs that actively promote bat habitat through enhancement and management activities. Cerro Verde received the award for its efforts to monitor and protect the Peruvian long-snouted bat (Platalina genovensium), an IUCN listed species. BCI has continued regular monitoring of the Mexican free-tailed bat population at Morenci since the bats' maternity roost was protected in 2010. Results indicate that the population has increased from 1.12 million to 1.35 million individuals in the past year.

In 2014, Safford operations partnered with Wild at Heart, an Arizona-based nonprofit dedicated to wildlife conservation, to relocate 20 displaced Burrowing Owls into an artificial habitat created on Company property. Community Development staff used the release as an opportunity to promote owl-focused education activities to volunteers and community members. In the past year, 15 of our operations created pollinator gardens not only to increase the diversity of nectar and pollen sources but also to provide communities with a setting to promote concepts of STEM education. To further promote pollinator conservation efforts, Freeport-McMoRan, in conjunction with the WHC and other conservation partners, developed a series of professional development courses for personnel on topics related to protection of pollinators, the enhancement of pollinator habitat and the potential of incorporating STEM education on pollinators more fully into Company programs.

The Atlantic Copper Foundation received the Andalucía Environment Award in the Business and Environment category, recognizing the Foundation's work to educate community stakeholders about the second most significant wetland reserve in Andalucía, the Marismas del Odiel Natural Park, which is part of a UNESCO World Network of Biosphere Reserves. Located adjacent to Atlantic Copper, Freeport-McMoRan's smelter in Huelva, Spain, Marismas del Odiel is a large estuary of the Odiel and Tinto Rivers, and consists of several smaller protected areas inside the park. The Foundation sponsors an environmental education program for children called "My Wetlands, My Schools" as well as an Explorers' School Day Camp at the park.

An Environmental and Social Impact Assessment (ESIA) was prepared for Cerro Verde's large-scale expansion, which identified project impacts to areas of modified and natural habitat that are host to an assortment of floral and faunal species (including guanaco, Peruvian long-snouted bat and a variety of cacti species). Resulting mitigation measures identified were added to Cerro Verde's existing Biodiversity Management Plan which already included a suite of measures for mitigating impacts to the same habitats and species. Subsequently, an Environmental and Social Due Diligence (ESDD) review was carried out on the expansion project in preparation for a credit agreement



A female guanaco (Lama guanicoe) at Cerro Verde mine near Arequipa, Peru.

between Cerro Verde and a consortium of Equator Principles Financial Institutions. The independent ESDD included a recommendation to clarify and enhance alignment of Cerro Verde's existing Biodiversity Management Plan with IFC Performance Standard 6. In response to this recommendation, Cerro Verde prepared a Biodiversity Action Plan, which further described specific mitigation measures and their contributions to species conservation for each of the Endangered, Critically Endangered, Endemic, and Restricted-Range species identified during the ESIA. The biodiversity-related recommendations from the ESDD review have been fully addressed and assured by an independent third party in 2014.

Freeport-McMoRan continues to manage Peck's Lake, a former oxbow of the Verde River located near Clarkdale, Arizona. Peck's Lake and the adjacent Tavasci Marsh form an Audubon Important Bird Area, and provide valuable wildlife habitat for a number of migrating, breeding and over-wintering bird species. Since 2012, Freeport-McMoRan has been controlling invasive aquatic plant species in the lake, with the goal of enhancing diverse native habitats for wildlife in this regionally unique and valuable aquatic ecosystem. We also work regularly with our lessees and tenants to maximize the value of our holdings including financial contributions for the construction and installation of wildlife friendly watering infrastructure and fencing. Through established partnerships with local, regional, state and federal agencies, Freeport-McMoRan and its lessees and tenants have been able to perform these improvement projects annually.

PTFI maintains a comprehensive environmental monitoring program throughout its project area, including the estuary downstream of the ModADA. Independent lines of evidence continue to indicate the reversible nature of impacts at the end of mining (with the exception of topographical changes) as predicted during the AMDAL (Environmental and Social Impact Assessment) process.



PTFI monitors bird species on Ajkwa and Waii Islands, which were formed by fine tailings material and sediment from natural erosion processes. Since monitoring began in 2009, 109 different bird species have been recorded utilizing the islands as habitat including the Australian pelican (Pelecanus conspicillatus) shown above on Ajkwa Island.



Artisanal mining impacts highly distinctive habitats where plant species of concern have evolved on highly mineralized soils. Pictured above, a rock outcrop within the TFM concession that has been the target of illegal artisanal mining.

TFM manages copper and cobalt mining and processing facilities within a 1,600-square-kilometer concession in Katanga Province, DRC, within a region referred to as the Katanga Copper Arc. The Katanga Copper Arc is geologically unique in that the significant copper-cobalt deposits occur at the ground surface in the form of hills. These hills and associated rock outcrops, which are the target of mining activities, support unique copper-cobalt clearings which contrast sharply with surrounding Miombo woodland forest. These clearings represent unique ecosystems that support numerous plant species that have evolved on highly mineralized soils, and the region has long been recognized by the scientific community as a hotspot for endemic metallophyte plants. To date, scientists have identified a total of 39 species of concern within the TFM concession. Consequently, the copper-cobalt ecosystems and associated plant clearings are considered the priority biodiversity issue for TFM. TFM continues its efforts to construct artificial ecosystems for plants transplanted prior to any commercial mining disturbance. In 2014, TFM completed construction of the Mwadinkomba Phase I artificial ecosystem that encompasses approximately 3 hectares (2.75 hectares of bulk topsoil and 0.25 hectares of vegetative mats) as well as the Fungurume Phase I artificial ecosystem that encompasses approximately 11 hectares (10.25 hectares of bulk topsoil and 0.94 hectares of vegetative mats).

We continue to closely monitor developing concepts, including no net loss, net positive impacts and ecosystem services. In 2014, we participated in Business for Social Responsibility workshops and initiatives related to ecosystem services assessment tools and, along with several other large multinational corporations, worked to address definitions, indicators and disclosures used to define and understand ecosystem service risks and opportunities. We also participate in the ICMM Biodiversity Working Group. As this field evolves, we will continue to enhance communications on our biodiversity systems and initiatives.

Since 2011, Freeport-McMoRan employees have participated in the Company's annual biodiversity photo contest. Each year approximately 400 photos are submitted by employees, and the contest successfully engages our workforce on biodiversity appreciation and to promote habitats at our worldwide operations. Winning photos from the popular contest are showcased within the Wildlife Habitat Council's Corporate Homes for Wildlife calendar, which is distributed internationally. The calendar showcases efforts by member companies to enhance and conserve wildlife habitat on corporate lands. Winning photos selected by the Company's Biodiversity Task Force are presented below.

# 2014 Winning Photos

An Eastern collared lizard at the Bagdad mine



A white-nosed coati near the Morenci mine



TR			

	2010	2011	2012	2013	2014
Workforce <sup>a</sup>					
Employees	29,700	31,800	34,000	36,100	35,000
Contractors	22,300	27,800	27,100	38,400	46,300
Percent Employees Under Collective Bargaining Agreements	44%	49%	48%	49%	48%
Safety & Health <sup>a</sup>					
Fatalities	2	5	6	35	7
Total Recordable Incident Rate <sup>b</sup>	0.65	0.61	0.58	0.74	0.56
Occupational Illness Cases	6	16	25	41	46
Environment					
Direct Greenhouse Gas Emissions (million metric tons)	5.6	5.4	5.7	5.9	5.2
Indirect Greenhouse Gas Emissions (million metric tons)	4.4	4.6	4.0	4.3	4.3
Total Water Consumption <sup>c</sup> (million cubic meters)	630	600	665	690	1,325
Percent Recycled Water <sup>c</sup>	66%	66%	71%	69%	79%
Reportable spills or releases of hazardous or toxic chemicals	10	11	12	16	14
Notices of Violations related to permit exceedances, spills, releases or other compliance matters	6	6	4	10	11
Environmental Penalties <sup>d</sup> (\$ thousands)	\$ 83	\$ 75	\$ 47	\$ 80	\$ 124
Social					
Community Investments (\$ millions)	\$ 189	\$ 191	\$ 173	\$ 173	\$ 198
Cash Payments to Governments <sup>a,e</sup> (\$ millions)	\$ 3,744	\$ 4,838	\$ 2,984	\$ 2,814	\$ 3,355
Direct Economic Contributions <sup>a,e</sup> (\$ millions)	\$13,902	\$16,559	\$14,470	\$17,283	\$17,030

a. Includes FM O&G beginning June 1, 2013
b. TRIR = [(Fatalities + Lost Time Incidents + Restricted Duty Incidents + Medical Treatment) x 200,000] / Total Hours Worked c. Excludes all facilities located in Arizona for years 2010-2013 due to water rights litigation

e. Please see detailed information in our WTSD reports published on fcx.com/sd