



# Responsible miner



# Contents

05	About the Report	28	Health & Safety
07	From the MD's Desk	32	Environmental Management
09	Vision & Mission	42	Our Employees
10	About Adani Enterprises Limited: Mining Business	46	Social Responsibility
14	Our Approach to Responsible Mining	52	Measuring our Impact
15	Sustainability Governance	53	Carmichael Mine Project
16	Stakeholder Engagement and Materiality Assessment	61	Bunyu Sustainability Reporting
17	Our Material Topics And Management Approach	69	Awards
18	Materiality Map	70	Appendix: Conversion Factor
20	Corporate Governance	71	References
23	Compliance & Risk Management	72	GRI Content Index
25	Ethics, Values and Integrity	77	Independent Assurance Statement
26	Economic Value		







## About the Report

Sustainability Report 2017-18 is a formal and transparent communication of the Sustainability performance of Adani Enterprises Ltd.: Mining Business to its stakeholders. The report has been prepared in accordance with the GRI Standards: Core option. Additionally, environmental performance reflected in the report has been calculated using the factors and values provided in the Green House Gas (GHG) Protocol and Inter-Governmental Panel on Climate Change (IPCC). Various national and local rules, regulations and guidelines have also been followed to assist in AEL: Mining Business's environmental and social footprint evaluation.

The report has a disclosure for the prioritized material issues details which have been provided in the chapter titled 'Stakeholder Engagement and Materiality Assessment.'

### Report Scope and Boundary

The report covers information for the period between April 1, 2017 to March 31, 2018 and includes our management and performance for topics material to AEL: Mining Business's operating mines in India. It also includes data from our Carmichael coal mine & Rail project in Australia, where relevant. Exploration activities have a lighter footprint than development or operations; accordingly, exploration data is only included where relevant. The scope of the report includes:

#### Operational Mines

- ▶ Parsa East and Kanta Basan Coal Block, Chhattisgarh
- ▶ Bunyu Mine, Indonesia

#### Non-Operational Mines

- ▶ Kente Extension Coal Block, Chhattisgarh
- ▶ Parsa Coal Block, Chhattisgarh
- ▶ GarePelma Sector-III Coal Block, Chhattisgarh
- ▶ Talabira II & III Coal Block, Odisha
- ▶ Carmichael Coal Mine, Australia

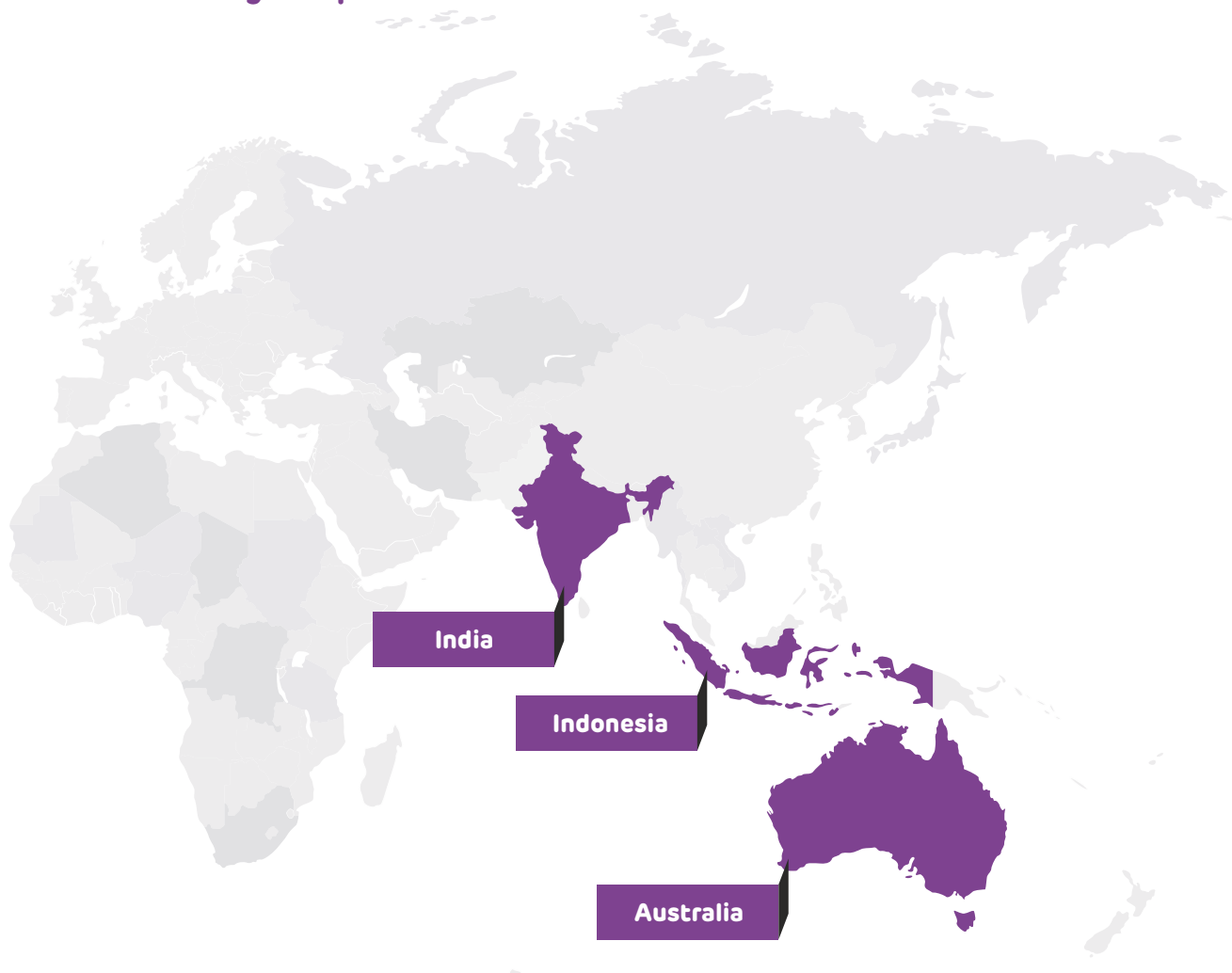
## Assurance Statement

Although the company has internal mechanisms to ensure the reliability of the data, the report has been assured by TUV Rheinland India Pvt. Ltd. thereby enhancing the credibility of the disclosures in the report. TUV Rheinland India Pvt. Ltd. is an independent third-party that has no financial interest in the operations of Adani Enterprises Limited: Mining Business other than for the assessment and assurance of this report. The assurance statement thus issued has been included in the report. Company's Top Management has been proactively involved in the assurance process.

No restatements have been made.

Continuing with its commitment towards Sustainable Development, the AEL: Mining Business will henceforth produce a sustainability report on a periodic basis aligning with its reporting cycle to the extent possible.

## Our Global Mining Footprint



For your suggestions and feedback,  
kindly write to us at:

[pramod.kumar2@adani.com](mailto:pramod.kumar2@adani.com)



## From the MD's Desk

**It is with great pride that I bring to you AEL: Mining Business's first standalone Sustainability Report for FY 2017-18. This report, developed as a proactive disclosure of our triple bottom-line initiatives, is the first such standalone report being presented by the company.**

Dear Stakeholders,

It is with great pride that I bring to you AEL: Mining Business's first standalone Sustainability Report for FY 2017-18. This report, developed as a proactive disclosure of our triple bottom line initiatives, is the first such standalone report for Mining business presented by the Company.

We started our journey with a mission to create value for all our stakeholders. In the process, we have followed a path of 'Growth with Goodness'. We foster inclusive growth with sustainability and social responsibility as an integral element of AEL's Mining Business corporate strategy.

We believe that good Governance and self-regulation is an essential parameter for achieving sustainability. Our focus is to achieve Environment, Social and Economic sustainability. Various initiatives are being deployed to enhance operational performance, create value for stakeholders, improve quality systems, Customer satisfaction, to develop and retain talent. We work diligently to provide our customers with a high quality product at the same time managing our environmental and social footprint.

While Indonesia & India Mining operations continue to deliver stellar business performances, the Carmichael mine and rail project

is progressing well towards construction. We have worked collaboratively with all levels of government, industry and community groups over the past eight years to ensure the development meets the highest environmental standards. We look forward to updating as this important coal mine and rail project reaches future milestones.

We achieved production of 4 MMT in Bunyu mine located in Indonesia. The mine continues to play a major role in the development of economy of Bunyu Island with generation of employment, creation of business opportunities for local community and various CSR programs. Along with focus on business growth, relentless efforts are made in the field of Health, Education, Economy, Environment, Rural Infrastructure, Socio-culture and Entertainment around our mine site in Indonesia.

With respect to India Mining, our financial performance for FY 2017-18 has been encouraging. We enjoyed the fruits of the efforts made over the last three to four years. Our coal mine production volumes stood at 8.33 MMT (ROM). The signing of coal mining service agreement for GP III and Talabira II & III is testament of the focused approach for winning these two blocks. With signing of these agreements, we have five ongoing MDO projects and our peak production capacity stands at 52 MMTPA. This is a major achievement for India Mining business.

Technology is one of our main business drivers of India Mining business. Our state of the art

infrastructure equipped with the latest technology has helped us to deliver value to our customers. Introduction of technological innovations such as GIS based Land reclamation systems, drones for safety surveillance, environment monitoring and security etc. has resulted in an increased efficiency. Further, we are looking beyond our business, into our value chain where we are handholding our outsourcing partners in using

**Our financial performance for FY 2017-18 has been encouraging. We enjoyed the fruits of the efforts made over the last three to four years. Our coal mine production volumes stood at 8.33 MMT (ROM).**

technology to make operations cost effective.

We are an environmentally conscious organization and all our operations across mine life cycle including exploration, mine planning, construction, mineral extraction, mine closure and post-closure reclamation and rehabilitation involves sustainable thinking including preservation of natural resources. We have taken various initiatives such as maintaining a GHG inventory, calculating our water footprint, energy footprint etc. I am happy to share that over

the years, we have undertaken large scale afforestation projects at the rate of 29 trees planted for every tree cut and had a near 85% success rate in replanting trees from impacted areas.

We owe our success to our employees who have worked dedicatedly and diligently for the growth of the organization. We encourage them to acquire new skills and knowledge that will foster growth in their careers. Our various training programmes are customized to the needs of our employees.

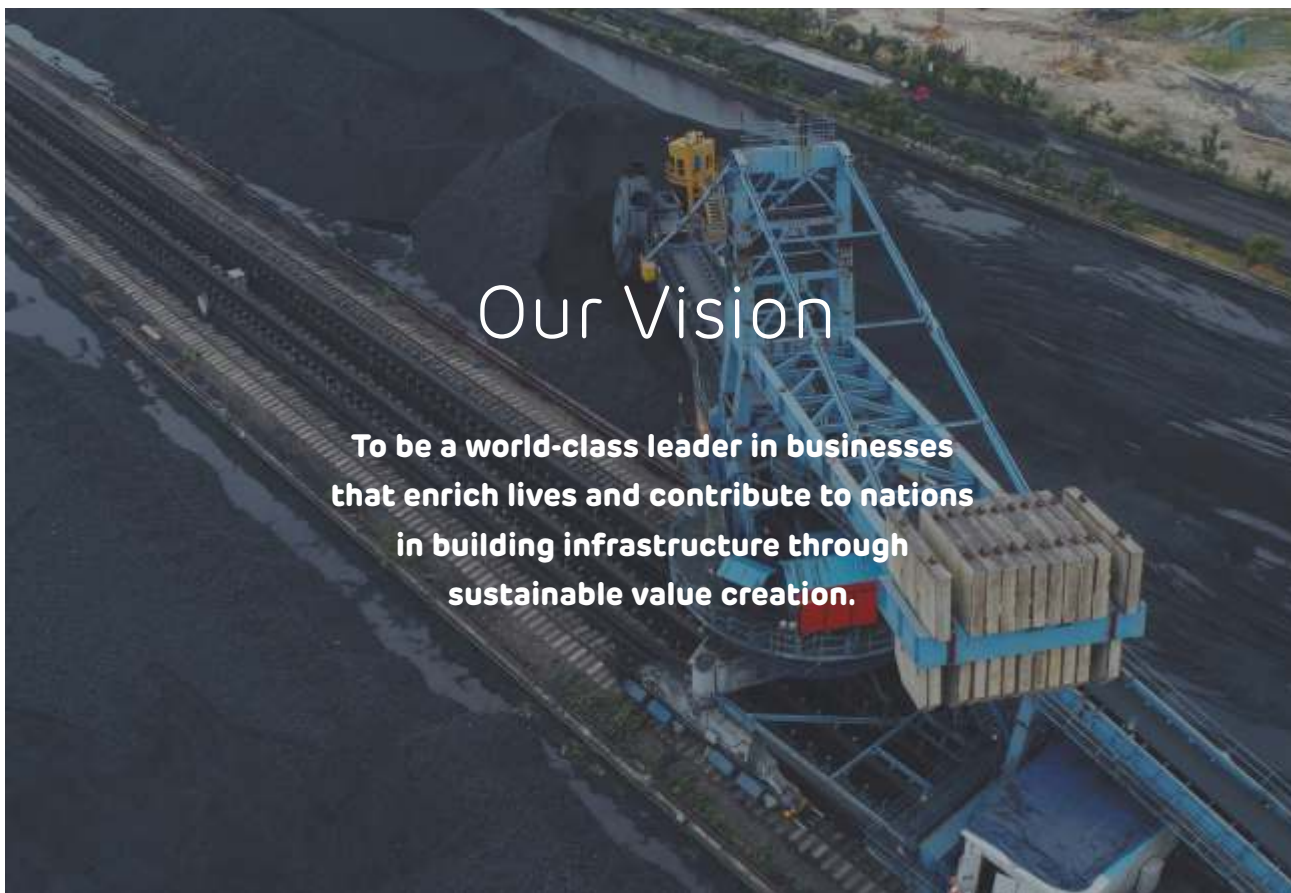
Our community initiatives are driven by passion, we work to transform lives across the nooks and corners of the country by means of generating employment opportunities for the tribal community, providing quality education to their children and affordable and accessible health care facilities. Further we initiate various programmes to impart vocational skills to the needy with an ultimate aim to make them self-sufficient thereby giving them a respectable life. All our efforts are oriented towards staying true to being a 'Responsible Miner'.

I thank our stakeholders for supporting us in our journey towards sustainability. We seek your continued support to enable us to achieve our goals and look forward to your feedback to improve our performance.

Regards,

**Rajesh Adani**





## Our Vision

**To be a world-class leader in businesses that enrich lives and contribute to nations in building infrastructure through sustainable value creation.**

## Our Mission

**We aim to reach 200 million MT through our mining and integrated coal management operations, making Adani one of the largest groups in this segment**

## About Adani Enterprises Limited: Mining Business

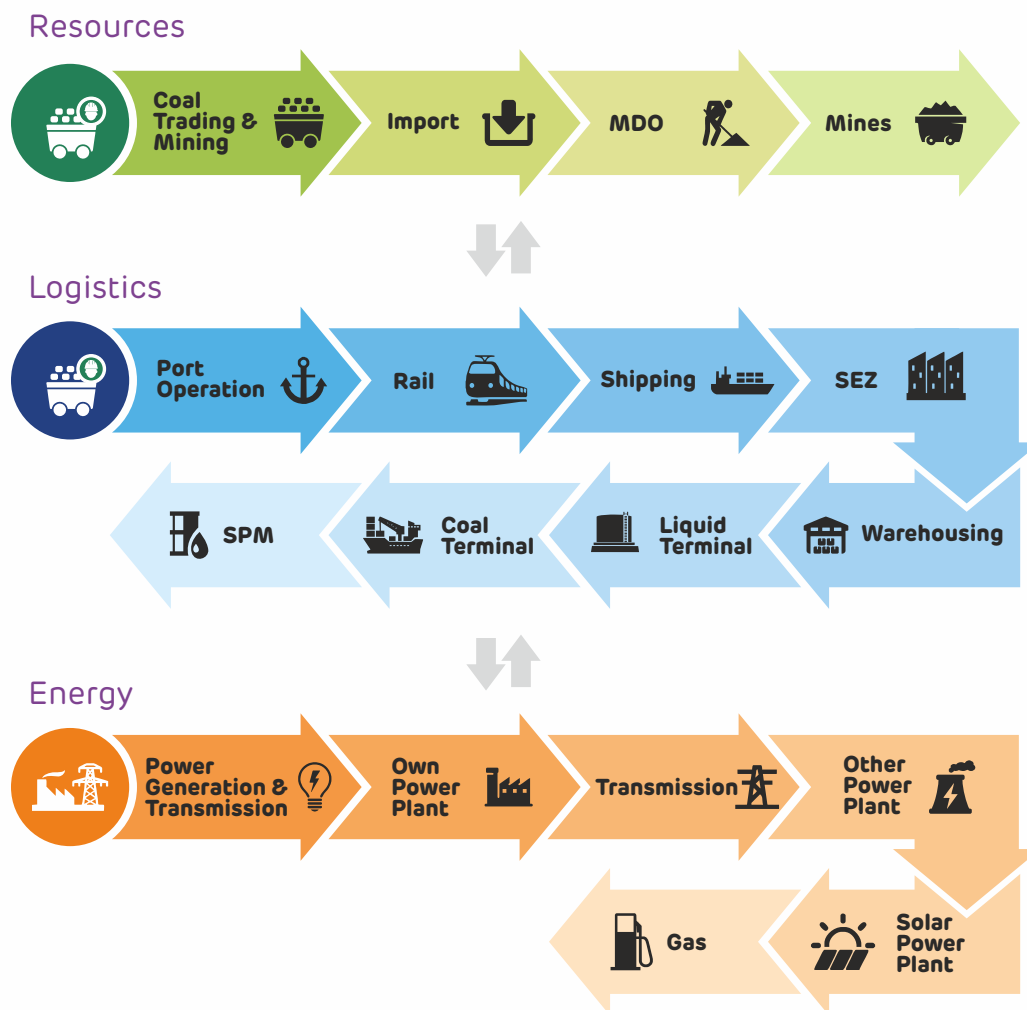
**Just about in a decade, we became one of the largest developers and operators of coal mines in the country.**

Adani Enterprises Limited: Mining Business, an India based mining company headquartered in Gurgaon, Haryana is engaged in the production, exploration, and development of coal mine. Our vision is to make India self-reliant. Through our operations, we bridge the gap between demand and supply of coal. Just about in a decade, we became one of the largest developers and operators of coal mines in the country. Globally, we have established footprints in Indonesia and Australia.

Location	Coal Resources	ROM Production (MMT)	Peak Production Capacity
India	1501 MMT	8.33	52 MMTPA
Australia	11090 MMT	-	60 MMTPA

As Mine developers and operators (MDO), our customers are state-owned power generation utilities and Central PSUs such as that of Rajasthan, Chhattisgarh and NLC. At the end of 2018, our business had 834 employees.

Throughout FY 2018, we operated coal mines, 100% owned by Rajasthan Rajya Vidyut Utpadan Nigam Limited in Parsa East and Kanta Basan, Chhattisgarh; and Bunyu Mine, Indonesia and our developing coal mines at Kente Extension; Parsa; Gare Pelma Sector-III in Chhattisgarh; Talabira II & III Coal Block in Odisha. We also developed Carmichael Coal Mine and Rail Project, in Queensland, Australia.



Adani Group is a business conglomerate based in India, having a global footprint with interests in Infrastructure, Power, Global Trading, Logistics, Energy, Port & SEZ, Mining, Oil & Gas, Agri-Business, FMCG products, Real Estate Development, Bunkering etc.

Adani Enterprises Limited: Mining Business is the flagship entity of US\$ 11 bn Adani Group. Adani Enterprises has business interests across – Integrated coal management and mining, renewable energy generation, agri-storage infrastructure, and services as well as edible oil and gas distribution. This business mix - business-to-business and business-to-consumer – is directed at enhancing access to basic services creating a less polluted world, delivering quality food grain and providing healthy cooking media.





### Parsa East and Kanta Basan

LOCATION - Central part of Hasdeo-Arand Coalfield in Surguja district, Chhattisgarh

MINEABLE RESERVE - 452.46 MMT

PEAK CAPACITY - 15 MMTPA

MINE LIFE - 30 Years

OWNERSHIP - 100% owned by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL)

### GarePelma Sector-III

LOCATION- Mand-Raigarh Coalfield in Raigarh district, Chhattisgarh

MINEABLE RESERVE (OC) - 94.70 MMT

PEAK CAPACITY - 5 MMTPA

MINE LIFE - 26 Years

OWNERSHIP - 100% owned by Chhattisgarh State Power Generation Company Limited

### Parsa

LOCATION - Central Part of Hasdeo-Arand Coalfield in Surguja district, Chhattisgarh

MINEABLE RESERVE - 200.41 MMT

PEAK CAPACITY - 5 MMTPA

MINE LIFE - 42 Years

OWNERSHIP - 100% owned by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL)

### Kente Extension

LOCATION - Central Part of Hasdeo-Arand Coalfield in Surguja District, Chhattisgarh

MINEABLE RESERVE (ESTIMATED) - 200 MMT

PEAK CAPACITY - 7 MMTPA

MINE LIFE - 30 Years

OWNERSHIP - 100% owned by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL)

### Talabira II & III Coal Block

LOCATION - IB Valley in Jharsuguda & Sambalpur district, Odisha

MINEABLE RESERVE - 580.55 MMT

PEAK CAPACITY - 23 MMTPA

MINE LIFE - 32 Years

OWNERSHIP - 100% owned by Neyveli Lignite Corporation India Limited.

### AUSTRALIA

Carmichael Coal Mine and Rail Project

LOCATION- North Galilee Basin approximately 160km North-west of Clermont in Central Queensland

MINEABLE RESERVE - 11.04 BMT

PEAK CAPACITY - 60 MMTPA

MINE LIFE - 100 Years (Tentative)

OWNERSHIP - 100% owned by subsidiary of AEL: Mining Business

### Indonesia

Bunyu Mine

LOCATION- Bunyu Island, North Kalimantan Province

MINEABLE RESERVE-269 MMT

PEAK CAPACITY-8 MMTPA

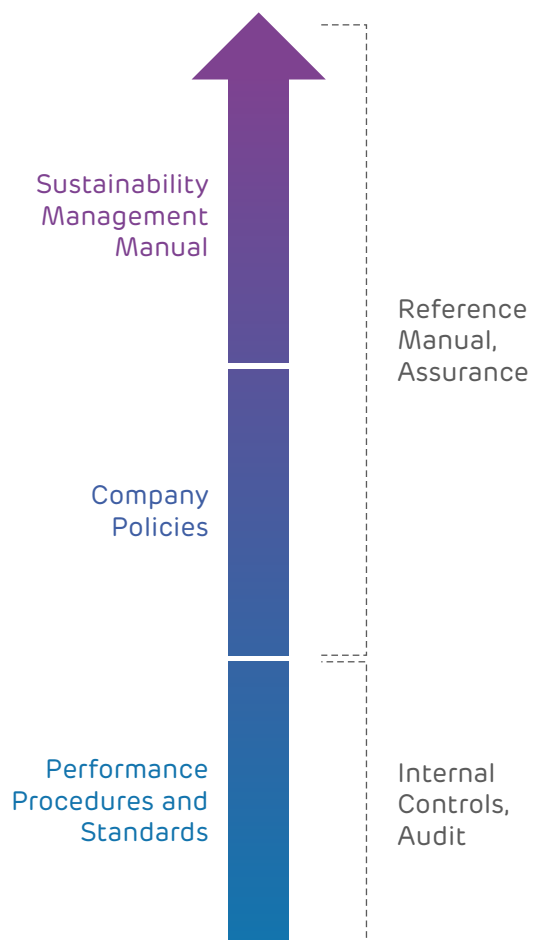
OWNERSHIP-100% owned by subsidiary of AEL

## Our Approach to Responsible Mining

Adani Enterprises Limited: Mining Business has strong technical capabilities in exploration, developing open mines, and a variety of mineral processing skills. We are committed to maintaining a safe environment for our people, operating and developing mines in line with good environmental practices, and building lasting relationships with the communities in which we operate.

AEL: Mining Business Responsible Mining Framework outlines our commitment to develop and implement management systems and operating practices that take into consideration applicable international guidelines and defines the way we manage material economic, social, health and safety and environmental issues.

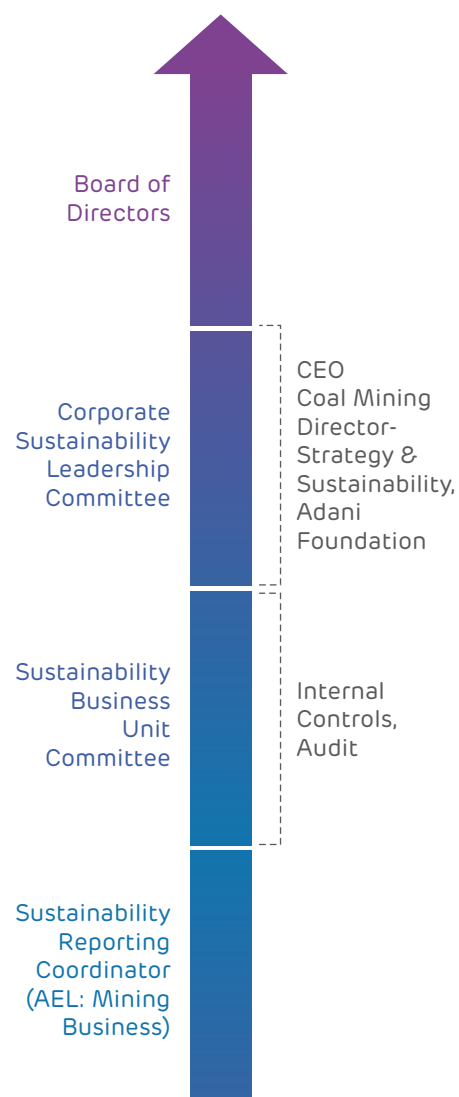
The Sustainability Management Framework has been developed in accordance with International guidelines for Social Responsibility ISO 26000: 2010 and externally assured for alignment and is implemented for management of environmental and social aspects of our business. It directly supports the company-wide implementation of our policies on Climate Change Human Rights, Corporate Social Responsibility, Environment, and Safety.





## Sustainability Governance

Adani Enterprises Limited: Mining Business has integrated Sustainability into its core business strategy. To ensure smooth implementation of various measures across the organization, we have established a Sustainability Governance mechanism wherein at the pinnacle is the Board of Directors followed by Corporate Sustainability Leadership Committee which looks after the Sustainability Business Unit Committee who is responsible for Sustainability Reporting Committee at each site.



## Stakeholder Engagement and Materiality Assessment

AEL: Mining Business is committed to ensuring open and inclusive dialogue and mutual understanding with its stakeholders during all phases of the mine-life cycle. The approach is based on clear communication, transparency, and trust and helps to earn and maintain long-term community acceptance and access to resources. Effective stakeholder engagement creates value, manages risks and helps us to understand the interests and concerns of our stakeholders and to communicate our business objectives. It also helps to identify, on an ongoing basis, emerging issues that could affect our business operations as well as changing social situations that may influence stakeholders' quality of life and perceptions of the mine.

In FY 2017, AEL: Mining Business engaged with specific stakeholders to identify and prioritize issues that are important for the organization to grow in a sustainable and responsible manner. We carried out a formal customer satisfaction survey, however, there is a continuous improvement process through which periodic feedback is taken from customers and immediate action is taken on any issue raised by them.

The organization is looking to improve its sustainability strategy and develop a road-map with short, medium and long-term targets that it would like to achieve within the next 3-5 years.

Stakeholders	Frequency of Engagement	Issues Discussed
Investors	Quarterly investor meets, annual reports, investor communications, half-yearly financial reporting, website and email, market announcements, annual general meeting, and industry conferences.	Profitability, Business growth, Compliance
Community	Regular site visits and team interactions with leaders and communities, complaints and grievance mechanisms.	Water Impact, CSR Activities, Safety, Employment
Employees	Monthly web sessions, Quarterly town-hall meetings, newsletters, social events, performance reviews, direct engagement between people leaders and their teams.	Employment, Diversity, Benefits, Training & Development, Employee Performance
Regulators	Face-to-face meetings, regular briefings, direct engagement.	Compliance, Environment Impact
Customers	Monthly meetings, reports, face-to-face discussions.	Customer Satisfaction, Cost, Production

# Our Material Topics and Management Approach

The sustainability reporting process is new to Adani Enterprises Limited: Mining Business, so during the reporting year, materiality exercise done by our parent company AEL: Mining Business in 2017 was reviewed. The review was limited to the organization's core sustainability team members and senior management at the corporate office. Prioritized list of material issues for the organization and the comprehensive list of issues applicable to business units included in the scope of

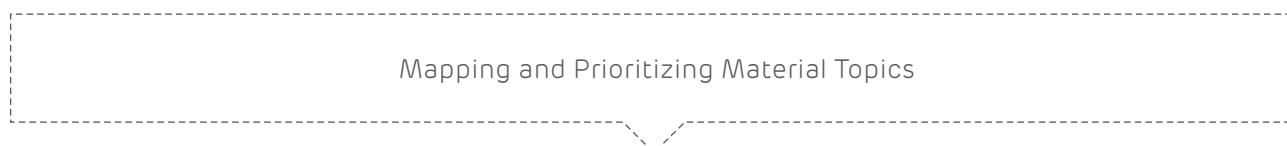
reporting, was prepared. Further, a separate materiality questionnaire was also sent out to them where each material issue ranked on a scale of low, medium or high.

For each material topics the topic boundary extended to the corporate offices, internal and contractual employees and communities around our mining operations in India. For local communities, the topic boundary includes India operation and Australia operations.

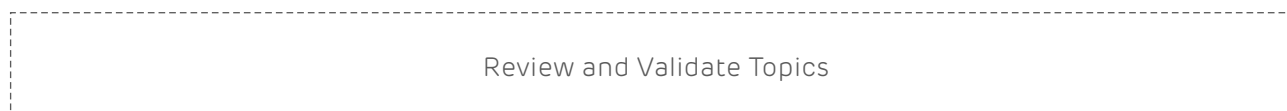
## List



## Prioritize



## Validate





## Materiality Map

The list of material issues around which content of the report has been developed are illustrated below:

Category	Material Issues	Stakeholders Impacted	Mining	Processing
Governance	Corporate Governance	Investors, Customers and Employees		
	Anti-Corruption	Investors, Customers and Employees		
Economic	Economic Performance	Investors, Employees, Customers, Suppliers		
	Indirect Economic Impact	Communities		
Environmental	Energy Management	Regulators and Communities		
	Water Management	Communities		
	Emissions	Regulators and Communities		
	Waste Management	Regulators and Communities		
	Environmental Compliance	Regulators and Communities		
	Biodiversity	Communities		
Social	Employment Practices	Employees		
	Community Development	Communities		
	Labour Management	Communities		
	Social Compliance	Communities		



Corporate Governance



## Anti-Corruption



## Economic Performance



Indirect  
Economic Impact



Energy  
Management



## Water Management



Emissions



## Waste Management



Biodiversity

Environmental  
Compliance

## Employment Practices



Community Development



Labour  
Management



## Social Compliance

## Corporate Governance

At Adani Enterprises Limited: Mining Business Corporate Governance is about meeting our strategic goals responsibly and transparently, while being accountable to our stakeholders. We are equipped with a robust framework of corporate governance that considers the long-term interest of every stakeholder as we operate with a commitment to integrity, fairness, equity, transparency, accountability, and commitment to values. The framework lays down procedures and mechanisms for enhancing leadership for smooth administration and productive

collaboration among employees, value chain, community, investors and the government.

Through the enterprise risk management approach, approved by the Board, management identifies key risks facing us and implements the necessary internal controls. While the process is monitored and evaluated under the direction of internal audit, key controls and accounting matters are covered during the external audit.

We are spearheaded by a competent, knowledgeable and committed Board of Directors.

The Board provides strategic guidance and independent views to the company's senior management while discharging its fiduciary responsibilities. As on March 31st, 2018, AEL: Mining Business board comprises of 10 Directors out of which 5 are Executive Directors and 5 are Independent Directors who are non-executive Directors. Independent Director plays a vital role in ensuring Corporate Governance in a company. The presence of an Independent Director brings focus and depth of perspective about the industry, company and they act as custodians of stakeholder's interest.



## Board of Directors

Gautam S. Adani  
Executive Chairman

Rajesh S. Adani  
Managing Director

Pranav Adani  
Director

Rajiv Nayar  
Additional Director & CFO

Vinay Prakash  
Additional Director

Berjis Desai  
Non-Executive  
Independent Director

Hemant M. Nerurkar  
Non-Executive  
Independent Director

V. Subramanian  
Non-Executive  
Independent Director

Vijaylaxmi Joshi  
Non-Executive  
Independent Director

Narendra Mairpady  
Non-Executive  
Independent Director

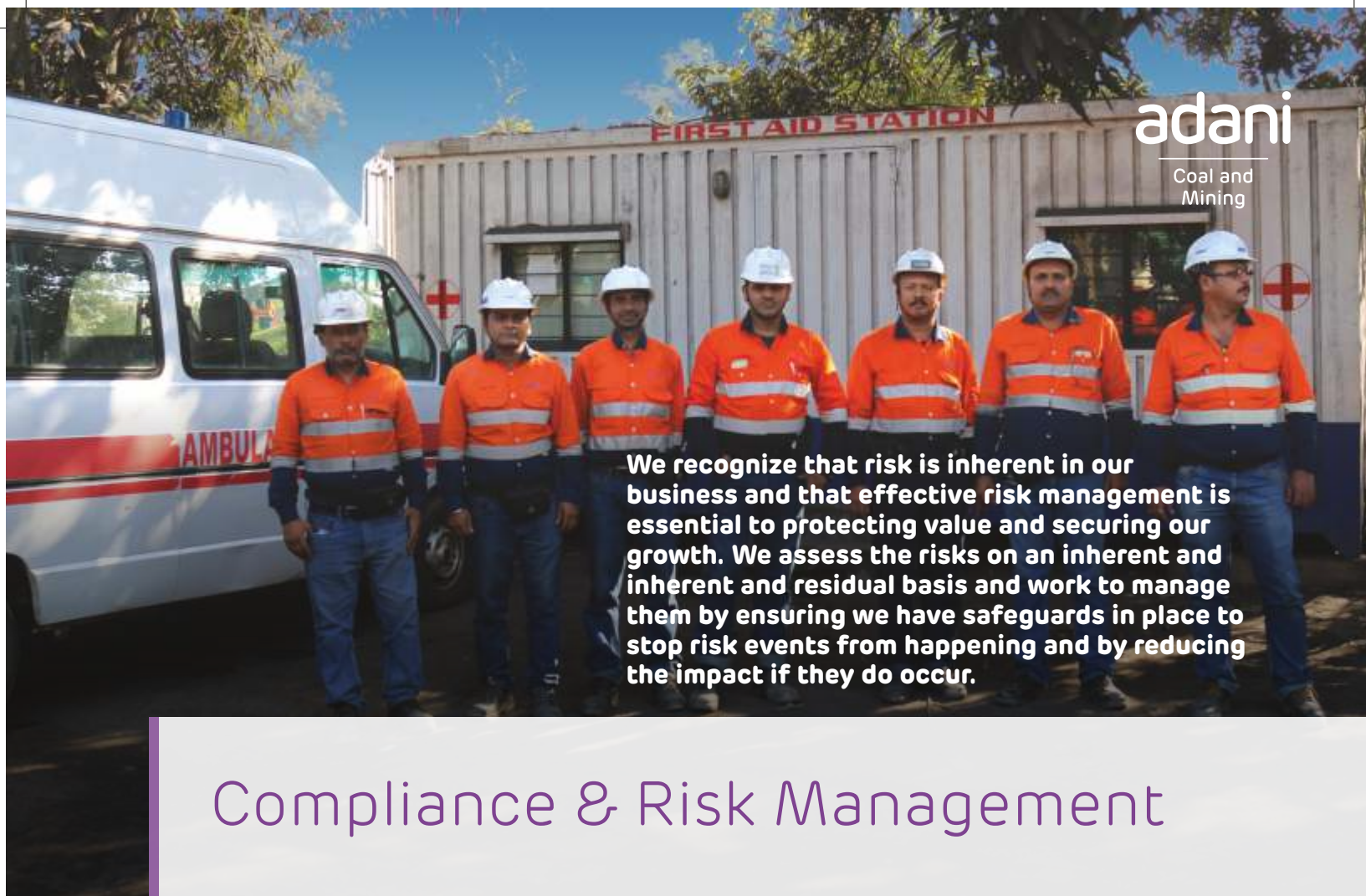
During the reporting period, 6 Board meetings were held. The Board meets at least once in every quarter and the gap between two meetings doesn't exceed 120 days.

The company follows the conditions of corporate governance as required under the SEBI (Listing Obligations & Disclosure Requirements Regulations, 2015).

### Committees of the Board

The Board has constituted various committees at the Board level to ensure that every activity or issue is addressed with utmost importance within the stipulated time. Each committee is formed with a specific purpose and responsibility. The board has established 6 committees including Audit Committee, Nomination & Remuneration Committee, Stakeholders Relationship Committee, Corporate Social Responsibility Committee, Risk Management Committee and Securities Transfer Committee.

Board of Directors					
Audit Committee	Stakeholders Relationship Committee	Nomination & Remuneration Committee	Corporate Social Responsibility Committee	Securities Transfer Committee	Risk Management Committee
					
Assists the Board in its responsibility for overseeing the quality and integrity of the accounting, auditing and reporting practices of the company.	Oversees and reviews all the matters connected with the transfer of the Company's securities; monitors redressal of investors /shareholders/ security holders' grievances; recommends methods to upgrade the standard of services to investors.	Formulates the criteria for determining qualified directors; recommends Policy on the remuneration for the Directors, key managerial people and other employees; carry out the evaluation of Director's performance.	Monitors CSR Policy and recommends activities to be undertaken by the company and the expenditure to be incurred on CSR activities to the Board. The committee also directs and oversees the strategic guidance and supervision of developments to address the sustainability requirements of the company.	Authorized to approve the transfer /transmission of Company's securities, issues of duplicate share/ debenture certificates, split up/ sub-division and consolidation of shares, issues of new certificates on re-materialization.	Lays down procedures to inform the Board about the risk assessment and minimization procedures as stated in the risk management framework.



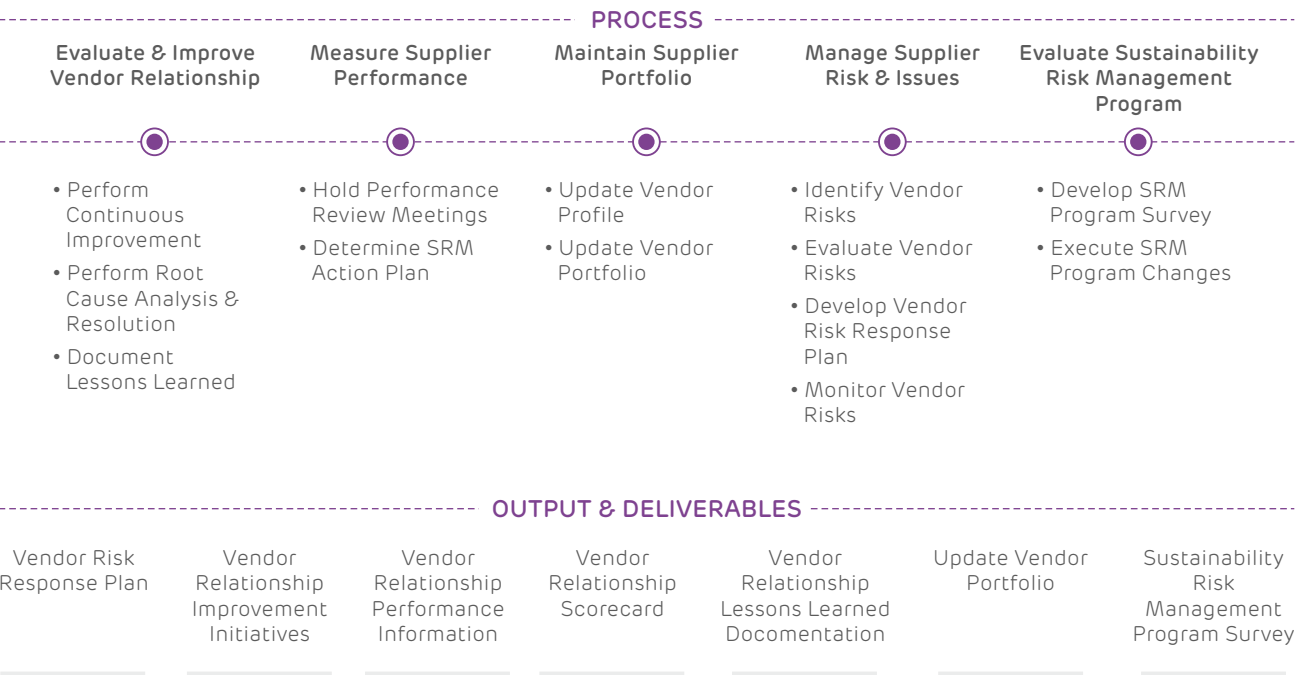
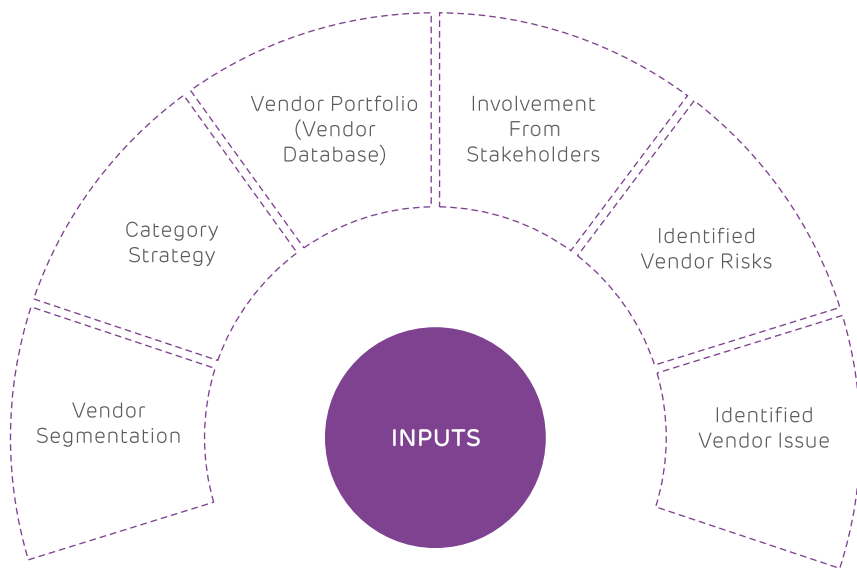
AEL: Mining Business has established strong internal control systems and best in class processes commensurate with its size and scale of operation. We have a dedicated Risk Management Committee to ensure the adequacy and effectiveness of internal control systems including those related to the strengthening of a company's risk management policies & systems. The senior management team delineates the overall tone of risk management through its corporate values, clearly assigned risk responsibilities and an exacting review mechanism.

As a proactive organization, we believe in preparing ourselves for the uncertainties. In line with this, we have developed and established a comprehensive risk

management system in accordance with ISO 31000: 2009, that facilitates identifying both internal & external risks. Within the business, Corporate Risk Management Cell (CRMC) works with each business vertical to establish and monitor the specific strategic, financial and operational risks. CRMC is responsible for assessing each risk and determining which of them are critical for the business which in turn is addressed on priority. Risk assessments are regularly conducted using approved criteria to determine the likelihood and seriousness of risk events and to identify potential impacts. Material Risks identified in this process are managed through the implementation of risk controls that are monitored and audited regularly for effectiveness.

For day-to-day operational risks, we have implemented "Legatrix", a software-based solution to manage compliance. "Legatrix" enables senior management with a one-stop view of the organization's compliances & control mechanism through comprehensive compliance dashboards & provides necessary information at the operating level by creating a comprehensive matrix on laws and its management. A full-fledged legal, as well as environment department, has been established specifically for Mining business to ensure compliance with various rules and regulations including Environmental Laws. No cases of corruption, environmental and social Non-compliance were reported during the reporting year.

Vendor Relationship Management involves collaboratively working with and building a relationship with vendors in order to meet business objectives.





## Ethics, Values and Integrity

Adani Enterprises Limited: Mining Business is driven by a culture that inculcates the spirit of being a responsible corporate citizen amongst its employees. We take pride in our culture as it promotes **PASSION, RESULTS, INTEGRATION, DEDICATION, and ENTREPRENEURSHIP**. Driven by a strong value system, each employee abides by the organizations policies and procedures.

### Values



#### Passion

Performing with enthusiasm and energy



#### Results

Consistently achieving goals



#### Integration

Working across functions and businesses to create synergies



#### Dedication

Working with commitment in the pursuit of our aims



#### Entrepreneurship

Seizing new opportunities with initiative and ownership

### Culture



#### **Courage**

We shall embrace new ideas and businesses



#### **Trust**

We shall believe in our employees and other stakeholders



#### **Commitment**

We shall stand by our promises and adhere to the high standard

### Code of Conduct

AEL's Code of Conduct reflects the values underpinning all of AEL: Mining Business's demeanour and our relationships with our stakeholders. We are guided by our values: Courage; Trust and Commitment. These values shape the behaviours we expect from everyone who works for us and provides the basis for our Code of Conduct.

The Code of Conduct applies to all the members of the Board and the senior management of the company. Through adherence to the code, we maintain standards of business conduct and ensure compliance with applicable laws.

Adani Code of Conduct covers a comprehensive range of policies and standards that govern the way we behave and operate. Policies include Whistle Blower policy, Corporate Social Responsibility Policy, Environment, Occupational Health & Safety policy, etc.

## Economic Value

The economic sustainability of our business is important to all our stakeholders. We continuously monitor our performance and objectives, conduct opportunity and risk assessments and integrate these findings into our economic strategy. We regularly review and adjust our actions to reflect changing internal dynamics and external factors affecting our business.

Adani Enterprises Limited: Mining Business overall registered improved financial performance on the back of its strong operational performance across key segments. During the reporting year, the organization entered into long-term MDO contracts of Gare Pelma sector III Coal block and Talabira II & III coal block with Chhatisgarh State Power generation company Limited and NLC India Limited respectively.

Our wholly owned subsidiaries in Australia have 100% interest in the Carmichael coal mine in Galilee basin in Queensland, Australia. We are working towards finalizing key contracts and strategy for financing the project. The table on the right provides an overview of the organization's financial performance over the last 3 years for India operations.

Adani Mining operations contribute to economic development and prosperity in regions where we operate. Beyond wages and salaries paid to employees and contractors, and taxes paid to the government, we focus our major community investments on initiatives that advance sustainable development. These investments include education and skills training, infrastructure

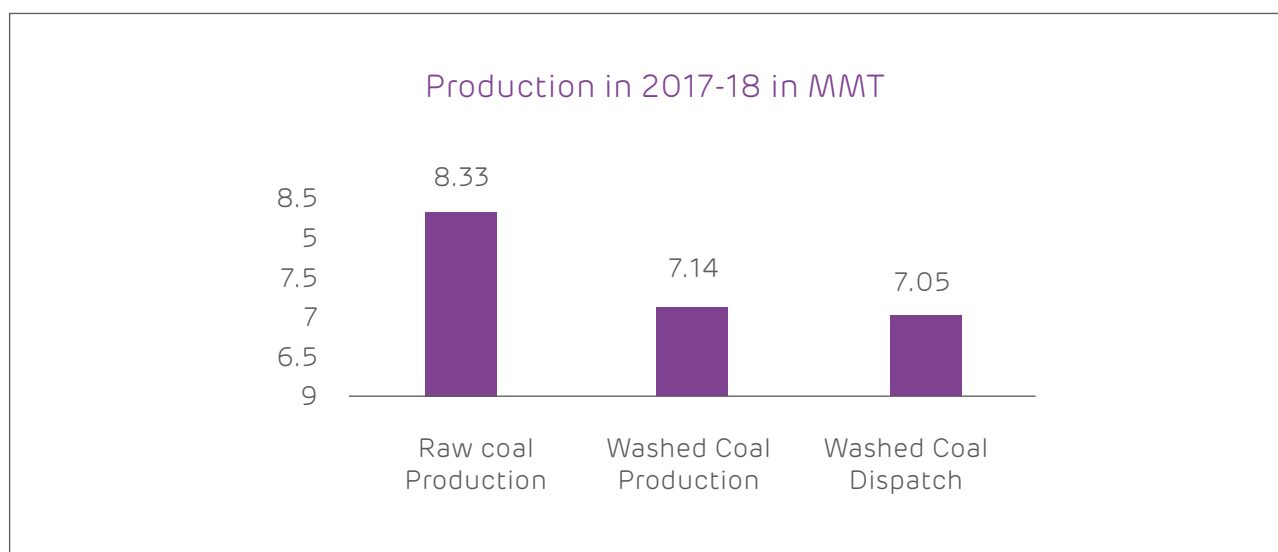
Domestic coal mining increased by  
**61,000** MT

Overall operations volumes to  
**8.33** MMT

Total economic value generated in 2018 was  
**804** Cr approximately

and building local capacity for economic empowerment; the Adani Foundation teams have made significant progress in these areas in 2018. As defined by the Global Reporting Initiative, our total economic value generated in 2018 was 804 Cr approximately as detailed in the following table:

Parameters	2015-16	2016-17	2017-18
Economic Value Generated (in Cr)			
Revenue from Operations	570	913	804





## Health & Safety

**Safety at the workplace is one of the core commitments. We value every life that is associated with us and believe in absolute adherence to the highest level of safety standards.**

Our continued long-term commitment to the safety of our employees is the catalyst for continued performance towards maintaining Zero harm environment. The Health & Safety policy delineated as part of our strategic focus, emphasizes on three key pillars:



Robust Safety Management  
at Site



Strong Safety Culture



Effective Control Mechanisms

These three pillars are supported by appropriate systems and controls to enable risk-free environment and empower our people to take timely action for working safely.



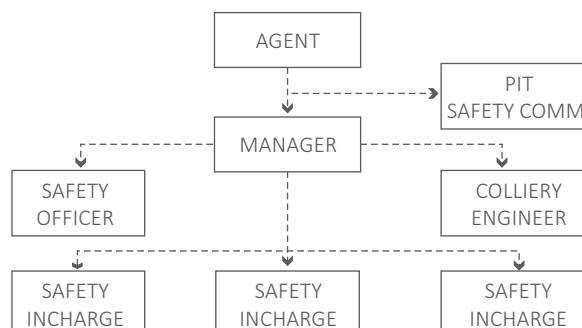
Sl. No.	PARTICULARS	2015-16	2016-17	2017-18
1	Fatal Accidents	0	0	0
2	Non-fatal accidents	1	2	1
3	Number of Near Miss Incidents	2	5	2
4	First Aid Cases	2	2	1
5	Total Man-Days lost due to Accidents	8	18	6
6	No. of Occupational Diseases	0	0	0
7	Frequency Rate of Accident	0.54	0.74	0.54
8	Severity Rate of Accident	4.37	6.65	3.22

The past 12 months have shown a significant improvement in our safety performance. There were no fatalities again for this reporting period and the total frequency rate saw a positive reduction of 27%, with 51.57% reduction in the severity of injuries.

### Safety Management

We believe that constant vigilance can prevent accidents and work towards 'scratch-less' mining. To streamline the process and to ensure that safety concerns are addressed on priority, we have established Safety Committees both at the mine level and factory level.

### Safety Organisation at Mine



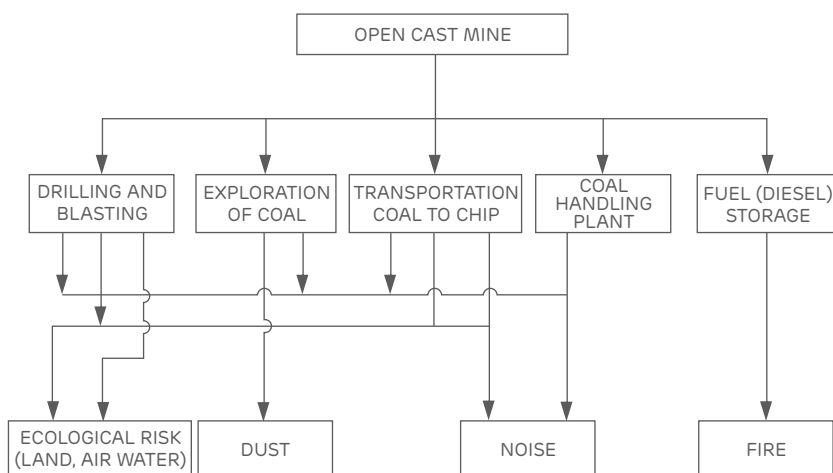
Safety Committee	Number of Members FY 2017-18	Percentage of Total Workforce
PTI Safety Committee (Mine Level)	35	7.20
Safety Committee for Washery and CHP	17	4.13

Robust process safety management aims to systematically and comprehensively manage the risks to protect our people and the environment. Risks are assessed through impact severity and probability studies and regular review of risks and controls at all sites are undertaken. We continue to monitor new and emerging issues in occupational health and safety and changes in regulatory environments, so we can identify mitigation strategies and responses.



## High Occupational Risks and Hazards

We have identified health and safety risks and associated hazards along with control measures in accordance with international standards OHSAS 18001 to ensure a safe work environment.



To ensure strict enforcement of standards, we have developed a safety policy with processes for regular monitoring.

### Our Safety policy focuses on:

Plan and perform work preventing pollution, injury, and ill-health

Promoting open communication with all stakeholders and sharing HSE knowledge

Improve HSE performance through a robust HSE governance process, regular audits and learning from HSE events

Zero deviation in compliance of any legal, regulatory, customer or AEL: Mining Business requirements

Demonstrate visible leadership and personal accountability for HSE at all levels in our business

Implement HSE Management System compliant with ISO 14001, OHSAS 18001 and AEL: Mining Business Standards.

AEL: Mining Business has adopted a systematic method to monitor and review the existing safety procedures and systems. The company periodically conducts internal and external safety audits to ensure accident-free workplace. To keep ourselves updated with latest technologies and developments in the sphere of industrial safety, we are the member of various committees such as Gujarat Safety Council (GSC), National Safety Council (NSC) and Institution of Fire Engineers (IFE-India). In addition, our mine at Parsa East & Kanta Basan is compliant with OHSAS 18001:2007 certification.

We are in the process of developing Online Incident Reporting System which will enable us to monitor incidents on a real-time basis as well as report incident to stakeholders on a periodic basis.

### Safety Culture

At our Parsa East and Kanta Basan Mine, we have established a well-equipped Vocational Training Center where Vocational Training Organisation & Vocational Training Institute conduct induction training for all the employees before their deployment in mine operation. During the reporting year, 72% of the employees (including contractual) were trained on Safety, Environment, and

Occupational topics. We continued to introduce and offer programs with a focus on maintaining and improving workforce health across our site over the past year. These include mock drills to prepare employees to respond in case of emergency, Safety promotion activities such as Fire Service Day and monthly "Safety Kumbh" celebrations. Last year, we introduced a detailed safety instruction booklet for employees and workers at the site. The booklet delineates a code of practices, safety instructions, and responsibilities of officers. This practice has increased the awareness levels of our employees and reduced the safety response rate.

Through our safety management system, we are fostering a culture of safety for visitors. A new KIOSK based visitor safety induction system has been introduced to ensure that all the visitors undergo mandatory safety induction process before entering the operational area.

Total No. of Employees	No. of Training Programmes			No. of Participants		% of Total Employees Trained
	Safety	Environment	Occupational Health	Officers	Workmen	
1518	5	3	2	120	976	72

## Control Mechanisms

Bolstering our commitment towards safe practices, we have developed Standard Operating Procedures (SOP), safety manuals, on-site emergency plans as guidance documents for employees. During the reporting period, we continued a strong focus on embedding the Control Management System into the way we operate, to ensure that the most important, life-saving controls are known, in place and working.

Our system comprises of:

- The Emergency medical assistance system consisting of First Aid room, first aid boxes installed at the location, ambulances, and Automated External Defibrillator (AED)
- Heavy Earth Moving Machineries (HEMM) equipped with the latest safety features
- Hi-VIS Shirts for all
- Online Incident Reporting System

A mobile app to undertake incident recording is in development to improve the ease of use and the effectiveness of the system.





## Environmental Management

**Effective environmental management is integral to the success of all of our mining operations, from day-to-day activities on-site to corporate strategic planning. We are committed to responsible mining and in compliance with applicable laws and regulations reflected in our Responsible Mining Manual, Management Systems and adoption of best-practice environmental standards.**

**Our primary objective is to minimize potential environmental impacts, throughout the life of our mines and post-closure, through the implementation of environmental management controls and procedures that are tailored to meet operational requirements. To protect the environment, we apply the precautionary approach, environmental risks are identified, assessed and addressed on a regular basis.**





## Sourcing & Procurement: Strengthening Vendor Relations

Vendors play a significant role in determining successful completion of a project in terms of schedule adherence, ensuring the quality of the asset being built and the cost of the asset. Hence, it's important that we select our vendors in a way that ensures that capable and potentially capable vendors are selected, and mutually beneficial relations are built and maintained through continuous assessment and improvement.

To build a fruitful relationship with the vendor, the feedback mechanism is an important tool that gives the opportunity to both business and the vendors to improve upon their process thereby resulting in mutual benefits.

The company has established a streamlined process known as "Vendor Relationship Management (VRM)". It is a systematic approach for managing vendor relationships to optimize value through cost reduction, innovation, risk mitigation and growth throughout the relationship life cycle. VRM involves collaboratively working and building relationships with Vendors to meet business objectives. VRM has the following 3 aspects:



Vendor identification  
and on-boarding



Manage vendor  
performance



Manage vendors queries  
and expectation

We have always believed in exploring ways to build a business structure that is in harmony with nature. We achieve this by monitoring and measuring our footprint, optimizing the use of natural resources, integration of environmental controls within our operations, employing risk assessment and management techniques to minimize the potential for unforeseen environmental impacts or incidents.

Each business vertical has management systems and policies in place to ensure that energy is consumed efficiently, energy reduction initiatives are implemented where feasible, water consumption is monitored on a periodic basis and biodiversity is enhanced around the mining location.

### Environmental Compliance

Environmental Permissions and Compliance management are critical aspects of the exploration and mining sector are effectively regulated to prevent possible negative impacts on the natural environment or the interests and rights of local communities. In addition to environmental approvals and permits, other mining-associated activities

may require permits that are not covered by environmental regulations. To support compliance during all phases of the mine life cycle, extending from exploration through to post-closure, we have developed Responsible Mining Manual. In addition, Coal mining business of AEL- PEKB is also certified with ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007. It also takes into consideration the aspects of water, air emissions & climate change, material use and waste management and biodiversity, ensuring that the organization has an integrated approach towards managing its environmental obligations. The mines are equipped with the latest Online Monitoring System to monitor ambient air quality at the mine site and surrounding area for estimation of pollution load on the ecosystem.

Climate change is recognized as a significant global environmental challenge that has environmental, social and economic impacts on business and people. Recognizing climate change as a threat to survival, we are making efforts to understand and manage our emissions.





Provide business with information that would be used to build an effective strategy to manage and reduce GHG emissions



Demonstrate industry commitment for consistent and transparent performance for GHG accounting, and reporting



Use the information to improve business processes, strategies and actions



Encourage and facilitate stakeholder feedback, engagement and dialogue processes towards mitigation of GHGs

## Energy Consumption

Due to the energy-intensive nature of mining and mineral processing, managing energy consumption and Greenhouse Gas (GHG) emissions is becoming increasingly important for us. In addition, we are also committed to managing other emissions from our operations, including nitrogen oxides and sulfur oxides

(NOx and SOx), particulates, each of which will be a significant environmental and/or social issue. All of our operations track upcoming changes to regulations and policies, particularly in relation to energy and GHGs. All of our operations demonstrate pro-active management of energy-use efficiency and identification of initiatives for GHG emissions reduction.

Energy	Direct (GJ)	6,08,485.68
	Indirect (GJ)	4,763.95
Emissions	Scope 1 (tCo2)	40,892.9
	Scope 2 (tCo2)	1,085.11
	Scope 3 (tCo2)	1,50,229.58

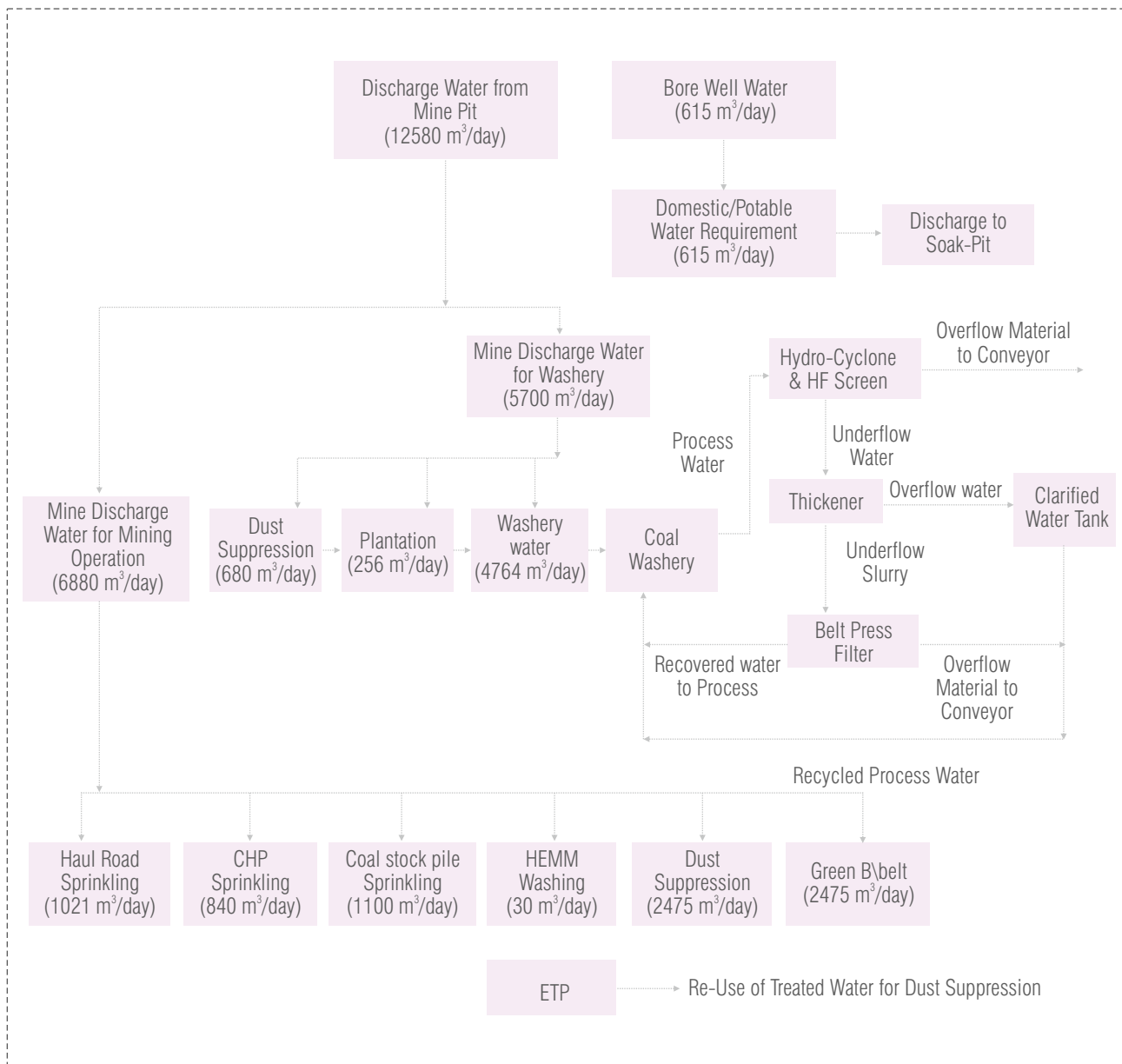
Energy from diesel is consumed in the greatest quantities at our operations, followed by electricity from the grid.

## Water

We implement a comprehensive water management planning process that allows us to operate without conflict with other water users in the community and to minimize any negative impact on water sources. Further supporting our commitment to sustainable water management, our strategies of water consumption and conservation have allowed our operations to maintain positive relationships with local communities and organizations.

We actively monitor the impacts of water withdrawals and discharges and have a well-established water balance system. The water consumed in our operations is recycled and reused for various activities such as dust suppression, plantation and washery activities. The consumption of water in our washery is 57 liters/MT of coal which is an industry benchmark.

CPCB. (source:  
<http://cpcb.nic.in/displaypdf.php?id=SW5kdXN0cnktU3BIY2lmaWMtU3RhbmRhcmRzL0VmZmx1ZW50LzQ4Mi0xLnBkZg==>)



Source of Water Consumption	Quantity (KL)
Ground water	49275
Seepage water	1557336

## Biodiversity and Land Reclamation

AEL: Mining Business considers its role in biodiversity stewardship to be a fundamental sustainability responsibility. We contribute to biodiversity management through the proper assessment of biodiversity conditions, minimization of habitat degradation and contributions to habitat restoration during the life of mine cycle. All our operational sites have aligned their existing Biodiversity Management Plans to the Sustainable mining manual, including compliance with the requirement to prepare and update their Biodiversity Action Plans on an annual basis.







We started the reclamation of the void created after mining from the second year of operation of the mine, which is one of the fastest in the country. We have successfully achieved physical reclamation of 74.7 hectares of land and biological reclamation of 118.40 hectares of land. Mines have been developed in a manner that its impact and disruption to the surrounding environment is minimal. Accordingly, the company has taken up many initiatives such as extensive plantation of trees, establishing a nursery for developing native species of flora and using treated mine seepage water for all operational water requirements.

Total land disturbed and not yet rehabilitated/reclaimed	177.37Ha
The total amount of land newly rehabilitated within the reporting period	28.3Ha

74.7

hectares of land  
physical reclamation

118.40

hectares of land  
biological reclamation

We believe that it is important to conserve biodiversity. So, we deploy a tree trans-planter for transplanting mature Sal trees found within the mining area. For the loss of every tree, we plant 29 new trees, such that a dense secondary forest is developed in and around mined-out areas. A total of 70,705 saplings have been planted in FY 2018 at the Parsa Kente site. A nursery has also been established for growing native species and over 40,000 saplings have been grown for plantation purposes during the reporting period.

The company implemented an eco-friendly Geo-Green Blanketing project in 2018 for slope stabilization and erosion control. The geo-green blanket works as a protective shield preventing soil

erosion during heavy rainfall, reducing surface runoff, arresting immediate migration of soil and favouring the development of dense vegetation.

### Waste Management

Responsible management of waste at our operations are formalized through the implementation of comprehensive waste management plans. These plans specify how the different types of waste produced by our activities are to be managed, including the identification of opportunities for waste minimization, recycling, and re-use. All waste generated by the Company's operations in 2018 was disposed of in accordance with applicable waste regulations and the site waste management plans.

During 2018, 9.2 MMT of waste was generated by AEL: Mining Business operations, of which more than 99%, was classified as non-hazardous waste. Hazardous waste generated at our operational sites is generally transported off-site, within the country, for treatment and re-use or disposal.

#### Non-Hazardous Waste

Type of Waste	Waste Disposed	Disposal Method
Overburden	1,94,90,000 m <sup>3</sup>	Land-filling at a designated area within Mining Lease area
Washery Reject	11,85,347 MT	Sold to consumers (power plants)

#### Hazardous Waste

Type of Waste	Disposal Method	Quantity
Spent Oil	Sold to the third-party approved recyclers	24.2 KL
Used Batteries		1.54 MT

### Technology & Innovation

"Technology is going to be a key enabler for sustainable mining way forward and is at the heart of our mining projects. Our focus is directed towards environment conservation and building social infrastructure so that prosperity and happiness reach the bottom of the pyramid and touches the lives of the citizens across the nearby areas and all our efforts are oriented towards staying true to name of being a Responsible Green-Miner. Our numerous initiatives for environmental protection are directed towards green belt development."

**– Uma Shankar,**  
Vice President

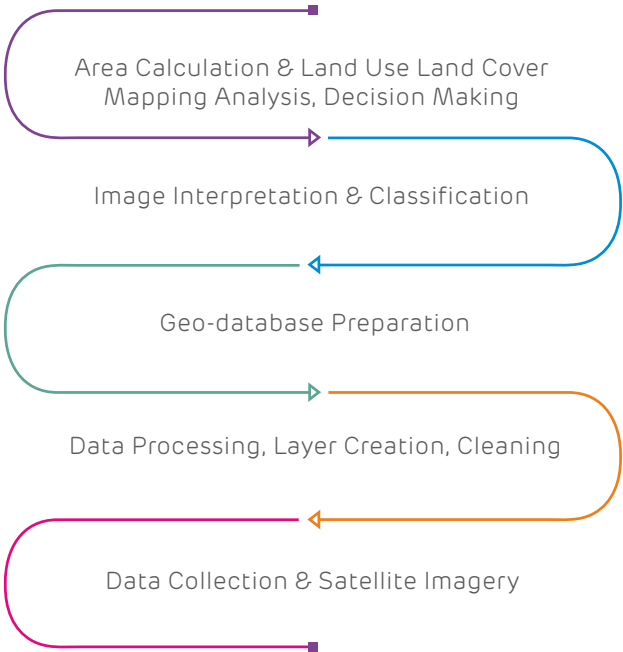


Mining Sector has been a labour-intensive exercise. But with time this sector has also evolved and various technologies are being used to mine more efficiently and with less risk underground. As Responsible Green-Miners, we are using cutting edge mining technologies at various stages in our operations to ensure the safety and sustainability of our mines.

Mining and technology are intricately entwined and technological interventions have positively impacted our processes. It has increased our operational efficiency and has reduced our cost at the same time making our operations safe and environment-friendly.

As a seismic shift from traditional techniques to mining, we have proactively started using the aid of technology to drive operational excellence. Through our digital mine initiative, we are rethinking our mining operations value chain.





Our key focus areas in making digital mine are:

-  **Enhancing Productivity**
-  **Cost Saving**
-  **Environment Monitoring**
-  **Safe Work Environment**



Removing the top soil and overburden



Excavating the coal



Replacing the overburden and topsoil

Preparing the topsoil for rehabilitation

Natural vegetation is restored

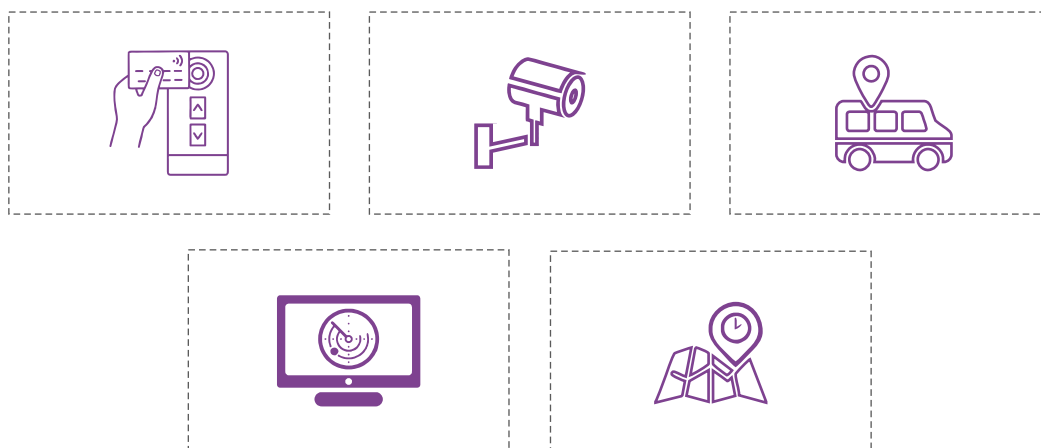
We are using **GIS-based land reclamation** with an aim to reduce our environmental impact. GIS is a versatile tool used for monitoring and reclamation by analysing and mapping soils, vegetation, surface hydrology, and groundwater. In addition, we use GIS mapping for rapid sizing, plotting of mine openings, waste piles, and cultural features. The process is as follows:

Further, we have installed various large-scale equipment and machinery to drive environment stewardship. These technologies such as Dozer push technology, high size HEMM, DMC Washery, large-sized efficient OB handling machine are helping us handle open-cast mines efficiently and enhance the quality of coal we mine.

We are improving Safety, Security & Surveillance



through - Integrated Security Control & Command Centre. These systems integrate card access, CCTV, vehicle tracking and real-time personnel location tracking systems, allowing us to control, monitor and communicate with onsite personnel.



To optimize cost and real-time feedback, we are using MIS. Towards this, we have developed a Resources One mobile application that spacing integrates various applications of Safety Surveillance, Incident Reporting, Web shots, etc. The technology provides equipment operators with real-time awareness, including audible tones, voice prompts and visualisations, so they can determine with accuracy their proximity to people, other equipment or infrastructure, and can react accordingly.

AEL: Mining Business is committed to become an industry that is high tech and data-driven, and makes the most of the limited supply of precious minerals that can still be mined from the earth.





## Our Employees

834 Employees

821 Men

13 Women

What lies behind the success of our organization is a pool of talented, diligent & hard-working employees. Our employees are our greatest strength and we constantly work towards providing them with a work environment that is conducive in nature.

We believe in following world-class processes, systems, and practices that are technologically driven and evolved. Introduction of technological innovations into our Human resource processes has led to an increase in efficiency and transparency. During the reporting period, business process transformation activities focused on process standardization and IT enablement & digitization of HR processes introduced in 2015-16 were further strengthened.

As on March 31, 2018, the organization's Human capital consists of 834 employees (821 men and 13 women).



Employment	Male	Female	Total
Permanent	284	2	386
Contractual	436	12	448

We recruit and retain a diverse pool of people from all sorts of different backgrounds; regardless of age, race, religion, gender, and culture. Our Human resource policies are designed to give maximum benefit to an employee. In turn, it facilitates talent retention. The employee turnover rate was 8.7%.



At Adani Enterprises Limited: Mining Business, employee engagement is a continuous process. Each employee is provided with various platforms to express themselves and raise concerns, therefore there are no formal trade unions. During the reporting period, the company actively sought feedback from all the employees in devising the future HR strategy of the organization and also revising the HR policies & benefits.

We maintain high standards as regards to addressing gender equity in the organization. During the reporting period, there have been no cases of discrimination on the basis of race, colour, sex or religion.

The performance management system is a medium that enables employees to align their goals with organizational goals. It identifies the strength and areas of improvement of an individual enabling them to perform better. During the Financial year 2017-2018, 100% of the employees on payroll have undergone the annual performance appraisal.

### Training & Development

The company has adopted a comprehensive learning & development management philosophy which includes self-learning modules, behavioural, functional/ domain and

business related trainings covering employees across levels.

We believe in developing a workforce that is ready to face future challenges. Our various training programmes are customized to meet the development needs of each employee. We invest in our Human capital with an objective to facilitate the growth of the individual as well as the organization.

Our Human resource department is committed to provide each employee with an opportunity to balance his/her work with personal life. Various programmes are organised including:

### Employee Engagement Initiatives

**Awards & Recognition:** At Adani Mines, employees are rewarded for their long association with the organization. We appreciate those who have dedicated years of their life to the organization. Long Service Awards function is an annual event that is held at various locations. Eligible employees receive the award directly from their CEO or COO.

**Family Day:** In order to boost staff morale and blend family life with work, the company organizes an annual event both at corporate office and site locations. Employees were invited along with their families to the event which comprises of various activities.







**"Wellness:** In this programme various meditation and yoga sessions were organized at the corporate office and the site location. The objective is to promote a healthy lifestyle among Adani employees. Further to promote physical well-being of employees and their families, the company organizes an initiative known as **"iRun"** wherein professionals were employed to train our employees on different running techniques to ultimately prepare for local marathon each year. In addition, to encourage employees towards sports, the company provides with state-of-the-art sports infrastructure such as gymnasium, badminton, volleyball court, billiards, etc. Sports events and tournaments are organized for employees and their families at Parsa.

To strengthen the relationship between the company, its employees and their families, a unique initiative was conceptualized. **"Parsa Got Talent"** is one of the initiatives which was rolled out at our mine site Parsa that aimed to provide a platform for the employees and their family members to showcase their unique talent and even hone their soft skills in the process and help them grow personally. It included various activities such as singing, dancing, playing instruments, etc.



## Social Responsibility

**"The confidence comes from that fact that we have cemented our name with a motto of 'Growth with Goodness' in PEKB and are on our way to help the local community around new projects too. During the current year, we have provided medical facilities to people through mobile healthcare unit at their doorstep; enabled clean drinking water supply to villagers under project Jeewan Amrit; organized health camps for awareness on various diseases provided medical support to malnourished children anemic and adolescent girls; empowered farmers through regular source of income under project Annapurna & Vasundhara; empowered women through various activities such as phenyl making school uniform stitching etc. All of this defines our motto of inclusive growth 'Growth with Goodness'.**

While community engagement can be considered a normal part of doing business for mining companies, the importance of building support for projects and operations continues to increase and evolve. Conflicting interests between communities and companies can result in project delays, operational disruption, and increased costs. Maintaining trust through effective community engagement to mitigate negative impacts and to maximize positive impacts is a critical component of maintaining a social license to operate. Communities may be affected by the environmental and social impacts of mining, such as competition for water and energy, air emissions, and stress on public services. At the same time, there can be significant opportunities, such as local economic benefits and enhanced infrastructure, when these impacts are well-managed in collaboration with communities.

The organization's concerted efforts to enable positive change are evident through its Corporate Social Responsibility (CSR) policy which delineates its philosophy and channelizes its

**The Foundation's activities are focused on four strategic pillars**



Health



Education



Livelihood



Rural  
Infrastructure



sustained efforts to drive social innovation and sustained economic growth of the local communities. Adani MDO's CSR is executed through Adani Foundation, the formative arm of the Adani Group. The Foundation works with an objective of invigorating a social change and fostering growth and well-being of the community around the company's operations.

Adani Enterprises Limited: Mining Business, through Adani Foundation proactively engages key stakeholders on sustainable development challenges and opportunities in an open and transparent manner. While specific opportunities and concerns about the impacts of our activities vary among communities in the areas where we operate, one of the common expectations of communities is meaningful engagement throughout the mining life cycle and maintaining strong relationships. These relationships continued to be a strategic business priority across all our sites in 2018. Each operation identifies opportunities to engage with the community by leveraging subject matter expertise of the Foundation. A large number of its CSR initiatives are targeted towards the marginalized and under-privileged sections of society.

## HIGHLIGHTS OF 2018



Chairman's visit to Surguja

## EDUCATION

The Foundation recognizes that education is a catalyst for positive transformation in societies and empowers the individual to live a better quality life.

### Adani Vidya Mandir

Adani Vidya Mandir(AVM)' school provides free of cost quality education to students from the weaker socio-economic background. In addition, to providing a rigorous academic curriculum, from LKG to VII class, AVMs with transportation, school uniforms, textbooks, notebooks, breakfast, lunch, and refreshments. Further, facilities for the overall

physical, mental and intellectual development are made available to the students.

### Sankalp

Our mines are in some of the most backward districts of the country where the tribal population is high. The company runs Sankalp Coaching Classes to support students of Standard 10 and 12 in preparing for the board examination. In 2017-18, these classes were promoted in the Salhi and Tara villages around Parsa East & Kanta Basan Coal Blocks in Surguja district, Chhattisgarh.



**73** Students  
in Coaching

**17** Students  
in 12th Standard

**10** Students  
in 10th Standard



## LIVELIHOODS

### Annapurna



Adani Foundation introduces initiatives for improved cultivation and encourages the farmers to use innovative techniques as well as form cooperatives. These initiatives are need-based, participatory in nature and vary from location to location, though the core strategy of productive agriculture remains the same.

### SRI Technique

The System of Rice Intensification (SRI) is an agro-ecological methodology that increases rice productivity and decreases input cost. This highly effective methodology is based on the cropping principles of significantly reducing plant population, improving soil conditions and irrigation methods for roots and plants as well as development and improvement of plant establishment methods.

Adani Foundation, in cooperation with the respective Block Agriculture Departments, equips with necessary skills to adopt the 'low water and labour'-intensive and organic methods.



**76** farmers trained with SRI technique, covering 128 acres land

**276** farmers supported with seeds for vegetable cultivation

**71** farmers were provided support for wheat cultivation in 106 acres of land



## Self Help Groups

Economic growth can be included only if it is complemented with social development. With this belief, the Foundation promotes women empowerment through the formation and strengthening of Self Help Groups (SHGs) and skill building. The women are also imparted with vocational skills such as the production of soaps, shampoos, cleaning agents, etc. This facilitates women to be independent leading to an elevated personal identity and social status.

## Adani Skill Development Centre (ASDC) – Project Saksham

Under project Saksham, an initiative of the Adani Skill Development Centre (ASDC), the foundation conducts skill-based training programmes, viz., Sewing Machine Operator, F&B service under Tourism and hospitality, Mining, Fitter & electrical assembly and Fitter for the youth from the area, thereby increasing their skill sets and employability. The youth are

provided placement support after successful training. The team from ASDC accompanies the youth where they are placed and stay for at least a week ensuring all necessary arrangements. They also help in all the logistic support for reaching and settling in placement.

## HEALTH

Basic Healthcare facilities are one of the key necessities that should be made available to everyone in India. The Foundation operates in areas where healthcare facilities are hard to reach, and more practical intervention was needed to meet the needs of the community.

## Mobile Health Care Unit (MHCU)

We deployed 2 Mobile Health Care Units (MHCUs) with the objective of providing basic healthcare facilities to remote rural areas to



the patients where the medical facility is not available. These facilities include diagnostics, medicines, free of cost consultation and referrals by certified doctors. As a result, patients save money on consultation fees, medicines and travel costs. This also reduces the possibility of losing livelihood due to timely treatments. The MHCU has a complete set of listed medicines. Its team includes a doctor, pharmacist, social protection officer, and driver.

The MHCUs have become a boon for women, young children, and the elderly population as they can avail healthcare services at their doorsteps. They create awareness and prevention of various critical diseases such as HIV/AIDS; Breast cancer, heart attack; Lifestyle diseases such as Blood pressure; diabetes; TB; malaria; dengue; Typhoid; Thyroid; the importance of mother's milk; Immunisation; basic health care and sanitation; intake of nutritious food with local diversity etc.



## SuPoshan

Malnutrition is intergenerational in nature and prevents our society from achieving its true potential in many spheres.

The Adani Foundation's SuPoshan Project strives to address these issues with a life-cycle approach that includes community-based management. There is a fine balance between the curative and preventive aspects of SuPoshan's strategy for reducing the occurrence of malnutrition and anaemia. Community health volunteers, 'SuPoshan Sanginis' are the backbone for the success of this project. These are trained on taking an anthropometric measurement, identification of Severely Acute Malnourishment (SAM) and Moderate Acute Malnutrition (MAM) play a pivotal role in the project.



## SuPoshan

118 SAM to MAM

166 MAM to Healthy

4 Adolescent &  
4 Women from Severe  
to Moderate Anaemic

312 from Moderate  
to Mild Anaemic

301 from Mild to No  
Anaemia

## MHCU

15 project villages of  
PKEB mine area through  
Wockhardt Foundation

About 2400 patients  
were provided medical  
treatment through the  
MHCUs

4000 villagers  
were sensitized  
regarding health issues



The project focuses on behavioural change communication with pregnant women, lactating mothers, children 0-5 years of age and adolescent girls as well as all women in the reproductive age group for promoting healthy food habits as preventive actions for anaemia. Mothers and would be mothers along with their family's decision-makers were guided through 10 proven points for curbing malnutrition with a specific focus on initiation of breastfeeding soon after birth and timely introduction of supplementary feeding after six months in addition to breastfeeding.

### Sanjeewani-W

Project Sanjeewani-W has been implemented as an integrated health programme to address the dismal health situation in the villages near Parsa Kente Collieries. It enables an environment where people can debate on health issues in the community and bring ideas of health, hygiene, sanitation, and safe motherhood into focus. Its objective is to increase the role of rural women in creating an accessible, gender-just health service within the village.

Vaccination to  
**196**  
pregnant women

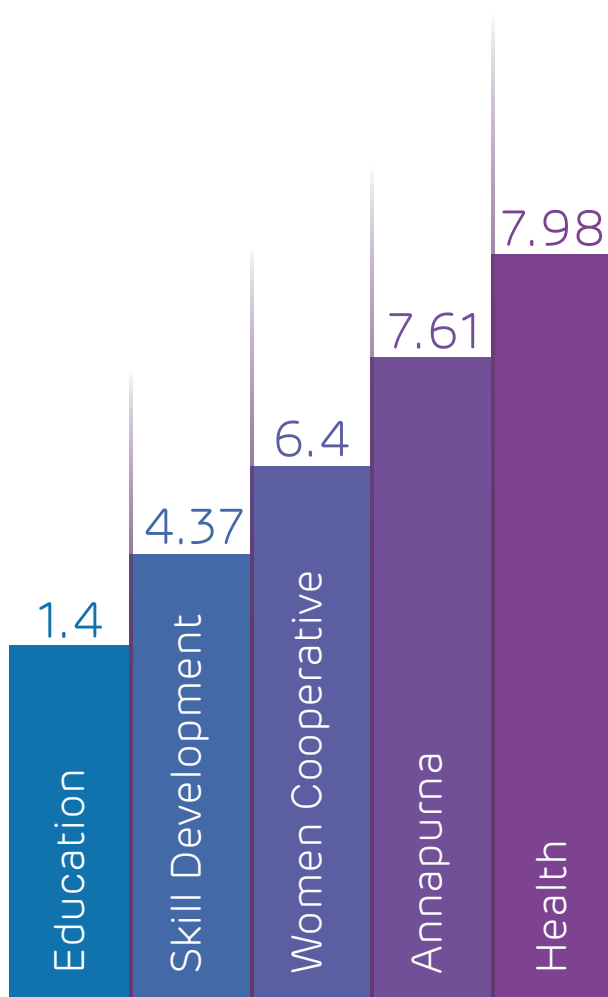
**520**  
children

**144**  
adolescent girls served  
by sanjeewani team



## Measuring our Impact

### Social Return On Investment - (SROI)



In 2018, we conducted our first Social Investment impact. The project was conceptualized to assess the Social Return On Investment (SROI) in community projects. Stakeholders of each of our interventions were asked specific questions in line with the intended outcomes of the project. This provided a framework to better understand how actions create change, by analysing the cause-and-effect chain of inputs, outputs, outcomes, and impacts. By completing the impact map, a pathway into impact measurement was developed. For each stakeholder, maps were finalised in consultation with project staff and outcome indicators were monetized, a value that is deemed to be close to the desired indicator.

Considering that outcomes can have longevity even if the project supporting them is no longer involved, projecting value into the future was done according to each component. In doing so, three things were taken into consideration, viz., Discount rate, Benefit period and Drop off. Since SROI measures the value of the benefits relative to the costs of achieving those benefits, the ratio of the net present value of the benefits to the net present value of the investment was calculated.



## Carmichael Mine Project





Adani Mining is committed to helping local regional communities thrive through employment and economic growth, while guided by strict environmental regulatory standards and practices.

Located more than 300km west of Australia's Queensland Coast, the Carmichael Mine and Rail Project is ideally positioned to maximise the opportunities of

the Galilee Basin – a thermal coal reserve ready to be opened.

The Carmichael Project is a thermal coal mine and rail project, which will transport coal from the Galilee Basin to countries in Asia, including India.

The quality of coal found in the Galilee Basin is high. Carmichael coal will assist countries with strong

emerging economies such as India, to provide reliable baseload power for its growing population, while progressing on the journey of increasing renewable energy sources.

By delivering a mine that produces 10 million tonnes of thermal coal per year, combined with a 200km rail line to connect the mine to the Port of Abbot Point, communities like Townsville, Rockhampton, Mackay, Bowen and the Isaac region are ideally positioned to receive new jobs and contract opportunities for local workers and businesses.

After eight years of rigorous and detailed planning, the Carmichael Project has been subject to more scrutiny than any other mining project in the history of Australia. Adani Mining has successfully overcome nine legal reviews on the Carmichael Project, in large part due to the extensive planning and high quality expertise that has been dedicated to the design process. At every turn, consideration has been given to the social, environmental and economic impact that will be afforded with the project's delivery, both in Australia and in emerging international economies.



2017-18 has seen Adani Mining progress its environmental management planning for the Carmichael Project while strengthening its relationships and connections within the local communities that will be the mine's neighbours, employees, suppliers and caretakers.

Adani Mining is working to deliver the Carmichael Project for the benefit of the local Australian community as well as the global community, while respecting and caring for the local environment in which it operates.

Adani Mining is committed to delivering the Carmichael Project by:

- Providing thousands of jobs for Australians in regional Queensland.
- Operating safely, responsibly and in a sustainable manner.
- Injecting billions of dollars in royalties into the local economy.
- Playing its part in creating affordable energy for those in the world who need it the most.
- Delivering shareholder value and benefits to the communities in which we operate.

## Respecting those who came before us

The Carmichael Mine and Rail Project was originally home to four indigenous groups, who have presided over the land for thousands of years. Since the outset of the Carmichael Project in 2010, Adani Mining has been dedicated to working in partnership with its Traditional Owners who are the Wangan and Jagalingou People, the Jangga People, the Birrah People and the Juru People.

From the earliest conversations Adani Mining had with the Traditional Owners, it was clear that employment and training opportunities for young indigenous people was a key concern for their communities. The importance of creating jobs and careers for generations of local indigenous people, while also respecting and protecting areas of cultural heritage and significance, has shaped the foundation of the formal agreements between the Traditional Owners and Adani Mining.

Indigenous Land Use Agreements and Cultural Heritage Management Plans are in place with all four Traditional Owner groups to ensure

### The Carmichael Project over time

2010 – Environmental impact assessment process commenced for the mine

2011 – 2015 – Exploration of the Carmichael mine site

2012 – Environmental impact assessment process commenced for the rail

2014 – Approval from the Queensland Government on both the mine and rail Environmental Impact Assessments

2015 – Approval from the Australian Government on both the mine and rail Environmental Impact Assessments

2016 – Environmental Authority granted by the Queensland Government for the mine

2016 – Mining lease granted by the Queensland Government

2016 – Queensland planning approvals obtained for the rail

2017 – Associated Water Licence granted by the Queensland Government

2018 – Environmental management plans being finalised

they benefit from the delivery of the Carmichael Project.

Through the Indigenous Participation Plan Adani Mining will ensure that Traditional Owners and the broader Indigenous community are well positioned to benefit significantly from the Project, either through jobs or contracting.

The plan comprises the following commitments:

- A minimum \$7.5 million spend on Indigenous education bursaries and pre-employment programs
- A minimum 10% Indigenous traineeships
- A minimum 7.5% Indigenous employment target
- A minimum spend of \$250 million in Indigenous contracting and business development.

## Protecting the Environment

In order to gain its Environmental Authority to construct and operate the Carmichael mine and to deliver the rail project, Adani Mining delivered extensive environmental impact assessments. The assessments detailed and quantified the effect of the project on the environment, while also assessing the social and economic benefits of the project. Numerous scientists, engineers, ecologists, economists, community members, industry stakeholders and more contributed to the delivery of these assessments. After a rigorous five year process, where every aspect of the Carmichael Project was put through intense scrutiny to ensure its reliability, the Project received approvals from both the Queensland and Australian Governments. With the approvals came more than 270 of the most stringent environmental conditions any mining project in Australia has ever seen, related to protecting local waterways, flora and fauna.

An example of this dedication to protecting local species is the management plan that has been developed by ecological experts to protect the endangered black-throated finch, which has been found in the area of the Carmichael mining lease.

The Black-Throated Finch Management Plan details a range of actions to protect the finch, including fencing, pest animal control, weed control, fire management, grazing management strategies and new water source locations.

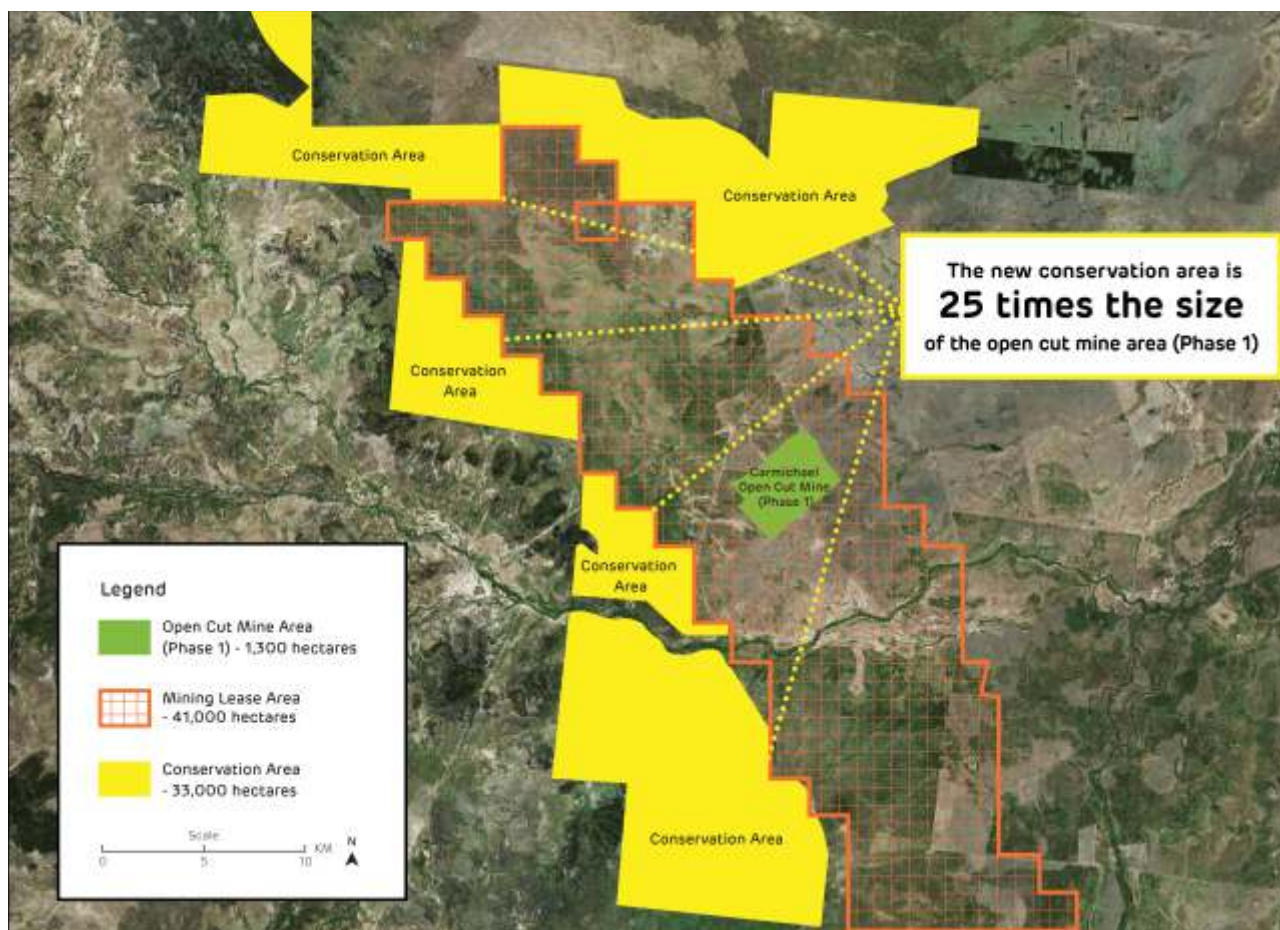
Ten detailed surveys have been completed on the finch between

**2012 and 2018.**

There is more known now about the finch than ever before because of Adani Mining's research.







A conservation area more than **33,000 hectares** in size is set aside to preserve the habitat of the finch.

Indicative map of the open cut mine (Phase 1), mining lease and conservation area boundaries

The conservation area is located 5km from the open cut mine and other infrastructure (e.g. roads and tracks).

At more than 33,000 hectares in size, the conservation area will be almost twice the size of Washington DC and one of the largest privately managed conservation areas in Queensland, Australia. It will also be 25 times the size of the mine area when it's operating at 10 million tonnes per annum.

Key features of the conservation area include medium length native grasses, a variety of seeds for feeding, specific trees preferable to the finch for nesting, and new water sources including troughs and dams.

Ten detailed surveys have been completed

on the finch between 2012 and 2018. There is more known now about the finch than ever before because of Adani Mining's research.

### Sustainable water management

2017 saw Adani Mining granted its Associated Water Licence for the Carmichael Project by the Queensland Government.

On site, water will be used for:

- washing coal (approximately 30% of coal will be washed to increase its energy efficiency);

- by people on site in offices, workshops and the accommodation village; and
- for dust suppression on roads and stockpiles.

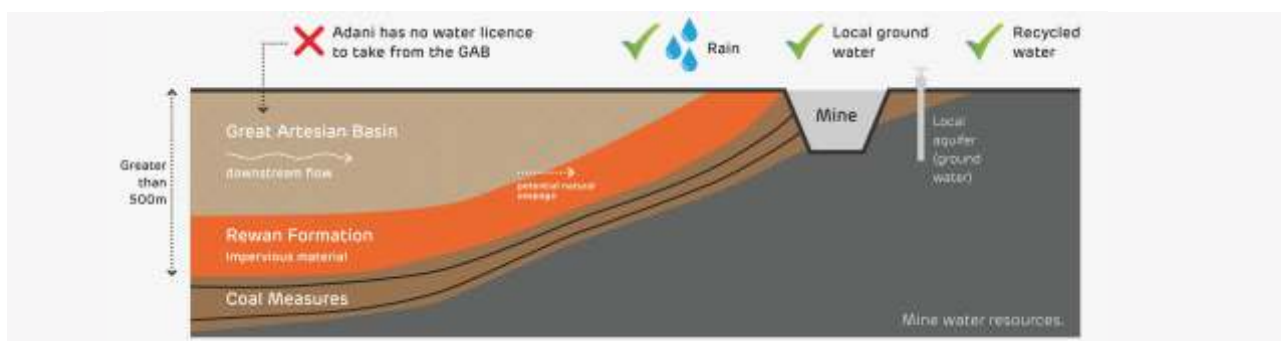
Water will come from:

- Groundwater
- Rain water
- Recycled water
- Suttor River water pumped under licence when the River is in flood and after farmers and other users have taken the water they need

Water security is a key concern for regional Australian communities that often face times of drought and hardship. To ensure local farmers are not detrimentally effected by the Carmichael mine, conditions have been put in place on the mine's water use. For example, Adani Mining can only take water from its local river source, the Suttor River, when the river is in flood, flowing at a rate of more than 2,592 ML per day, and only after local farmers have first taken their share. Agreements are also in place between Adani Mining and local landholders who share the same groundwater, to ensure that if their groundwater use is affected, they will be compensated either financially or through alternative water provision.

### Fast Facts on Water Management

- The mine will use water for washing coal, general use in offices and workshops, and safety dust suppression measures.
- The mine will use groundwater from in and around the mine to ensure safe mining. This will come from local aquifers connected to the coal seams, not the Great Artesian Basin.
- The mine will also use rainwater, recycled water, and water from the Suttor River but only after farmers have taken their share and it's flowing at a rate of 2,592ML per day. Adani Mining must pay for use of this water upfront.
- Adani will only take the water required to support the mine at each stage of production. In its initial phase the Carmichael mine will produce approximately 10 million tonnes per year, and we will only take the water required to operate the mine at this production rate.
- The Carmichael mine's water management plan is strictly regulated under a framework of approvals that are backed by six years of scientific assessments.
- The mine will not take water from the Great Artesian Basin because the two are separated by an underground 300m thick layer of claystone called the Rewan Formation, which acts as a natural impervious layer.
- The mine cannot take water from the Suttor River when it is in drought.
- The mine will have more than 100 monitoring bores to observe underground water levels.
- A levee wall and 1km buffer zone will separate the mine from the Carmichael River to protect the riverine environment.





### It takes a village to raise a mine

Without the support of the local communities that will be the mine and rail's neighbours, employees, suppliers and caretakers, it would be impossible to deliver the Carmichael Project. The work and unwavering support already provided by local regional communities to deliver the Carmichael Project is vast and a testament to constantly improving their own communities.

Ensuring these communities are appreciated and supported in return is key to Adani Mining maintaining its social licence within

the regions. Becoming an embedded and reliable constant that is woven into the cultural fabric of these communities has been an eight year journey. From establishing its regional headquarters in Townsville, to celebrating community festivals, conducting regular briefings with community members, and even helping clean cities after floods and extreme weather, Adani Mining is determined to give back to its core communities.

Driving its positive contributions are social impact management strategies that will provide mutual benefits to both the

419 students, 78 teachers and 40 staff  
have participated in sponsored and supported activities



communities and the Carmichael Project. The strategies have been developed across five key areas including:

1. Community and Stakeholder Engagement
2. Housing and Accommodation
3. Workforce Management
4. Local Business and Industry Content
5. Health and Community Wellbeing

The purpose of the social impact management strategies is to identify the actions Adani Mining and its contractors will take to enhance social opportunities. The strategies are adaptive and will continue to evolve through annual monitoring and reporting and in consultation with government, community and key stakeholders.

The community partnership fund supports numerous local charities, organisations and local events that help bring the community to life. One of Adani Mining's key community from 2018 was its support for the Queensland Minerals and Energy Academy's school program. QMEA is a highly successful program educating students on the various pathways into the resources sector and other science, technology, engineering and maths (STEM) industries.

Our contribution in 2018 was:

- 419 students, 78 teachers and 40 staff have participated in sponsored and supported activities
- 11 events
- A week-long 'Make it now in Engineering' camp at CQ University in Rockhampton

## Strengthening local economies

The mining industry is known across Australia, and especially Queensland, for being the backbone of regional communities, providing high-paying employment and training opportunities, improved infrastructure and community contributions.

Adani Mining has been welcomed by regional Queensland communities due to the jobs and contracts the Carmichael Project will provide for generations.

Rockhampton and Townsville will be the primary employment hubs for the Carmichael Project.

Contractors for the Carmichael Project will largely come from across regional Queensland as well, from places like the Isaac region, Mackay, the Whitsundays and Gladstone as well as Townsville and Rockhampton.

During the construction and ramp-up of the Carmichael Project at 10 million tonnes of coal produced per year, there will be 1,500 jobs for people directly working on the mine and rail, and an additional 6,750 jobs in supporting industries. Approximately 8,250 jobs are expected in this first phase of the project. Critically, all these jobs are all new jobs that didn't exist before, many of which will go to regional Queensland communities like Rockhampton, Townsville, Mackay and the Isaac region. The other thing to note is that these new jobs are not coming at the expense of jobs elsewhere in Australia as Adani Mining will be selling into new markets for Australian coal.



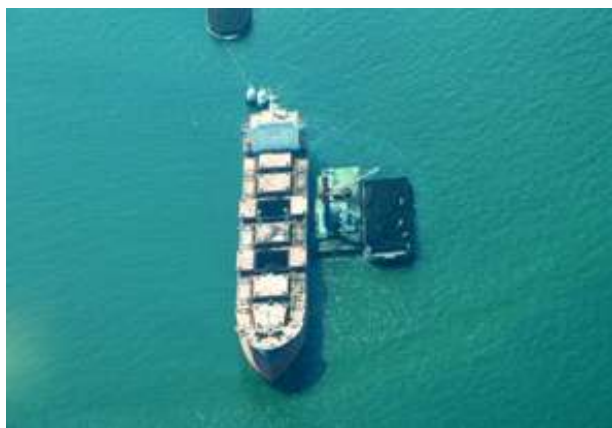
## Bunyu Sustainability Reporting

Adani group ventured into mining business way back in year 2007 after getting exploitation licenses from Indonesian Govt. for two no. of coal concessions through its step-down subsidiaries PT Lamindo Inter Multikon (LIM) and PT. Mitra NiagaMulia (MNM). Both these coal concessions are located at south-eastern part of Bunyu island of North Kalimantan province. The total area is 2,607 Hectare with estimated coal resource of 269 Mn MT and peak production capacity of 8 MMTPA.



Total area is 2,607 Hectare with estimated coal resource of 269 Mn MT and **peak production capacity of 8 MMTPA**

The company, PT. Lamindo Inter Multikon, has also constructed coal processing unit along with a coal terminal to facilitate export of coal. Cape Vessels normally arrive about 8 to 10 Nautical miles from the Jetty. The run of mine (ROM) coal is first crushed and then loaded into barges which carry it to the mother vessel. The company owns a floating crane "Surya Pratama Karya (SPK)" with a loading capacity of more than 30,000 MT/Day.



Today, Adani Bunu mine has become the largest producer and the largest exporter of 3000 Kcal coal in Indonesia. Its products are listed under HBA as LIM 3010 and LIM 3000. Shipment is mostly bound to thermal power plants in India.

Year	FY'15-16	FY'16-17	FY'17 -18
OB Removal (MBCM)	12.94	9.88	10.10
ROM Production (MMT)	5.01	3.90	4.00
Shipment	5.13	4.38	3.32



Adani Bunyu mine has played a significant role in development of economy of Bunyu Island with generation of employment, creation of business opportunities for local community and its various CSR programs. It has employed more than 550 persons on the company payroll and more than 700 persons on contractual payroll with more than 90% persons coming from Bunyu.

## Corporate Social Responsibility

Community development has remained integral part Adani group and the same philosophy has been adopted at Bunyu mine also. The company gives a lot of emphasis on upliftment of local people through CSR initiatives focusing on Health, Education, Economy, Environment, Rural Infrastructure, Socio-culture and Entertainment.

### Health

Bunyu, being a remotely located island, lack in public or private medical facilities. The company has taken various initiatives to ensure availability of basic medical facilities for all. It provides free ambulance speed boat services, organizes medical camps for the villagers, distributes medical kits in schools. Company also extends support to the govt. hospital at Bunyu by providing services of paramedic staff. It has created a guest house facility at Tarakan for all the patients from Bunyu getting treated at govt. hospital there.



Ambulance Speed Boat



Medical Camp

### Education

Helping the community to obtain proper education is goal of the company's CSR policy. The company has been providing infrastructural support to 11 no. school in the nearby villages in terms of bus facility, lab equipment, text books, furniture, library support etc. In FY'17-18, it launched a new initiative of Mobile Library with availability of more than 1100 books covering wide range of topics.

FY'17-18		
Eye Check-up <b>225</b> persons	Health Check-up in 3 villages – <b>120</b> persons	Health Seminar in schools <b>120</b> students



Mobile Library

The company has given special attention in promoting vocational training and higher studies amongst the villagers. It has established a workshop at mine site where apprentice students from Bunyu Technical school are getting hands on experience. The company provides scholarship support to meritorious students for higher education (degree programs) with stipend of Rp. 1,000,000 million (approx. 70\$) per month. Total 44 students have benefited from the scheme since 2013 – 18.

### Economic Empowerment

Economic empowerment of local community is another area where the company has been giving significant attention. It has established a drinking water making plant and handed over to a local cooperative which supplies water gallons to the company as well as to the local community. The profit generated is being used for community development activities.



### Rural Infrastructure

Development of community infrastructure is a part of company CSR responsibility. The company has provided direct assistance for infrastructural projects proposed by the local community, in particular construction and repair of roads, renovation of community centers, construction of toilets in schools, parking stand etc. There were approximately 25 no. of such projects carried out during FY'17-18.



Repair of village Road



Construction of parking stand

## Ensuring Water Security for people

Company has taken various steps to ensure availability of potable water for all. It has installed tanks at each house for rain water harvesting. It has also constructed water treatment plant and provides door to door delivery of water to each house.



## Environment Management

Aligned with Group vision of 'Green Mining' the company is committed to maintain flora and fauna of the project affected areas. It has established a series of environment indicators which are monitored and reviewed throughout the year.

The company has been consistently carrying out the land reclamation activities in the

mined-out area. The reclamation process is completed in multiple stages – back-filling of mined out area and its recontouring, spreading of top soil and followed by plantation of grass and fast-growing local species such as Sengon etc. In year 2017, approx. 5300 saplings have been planted.

### Recontouring (in Ha)

2008 - 16	2017	2018
147.25	43.75	47.26

### Spreading Top Soil (in Ha)

2008 - 16	2017	2018
22.09	28.44	33.08

### Cover Cropping (in Ha)

2008 - 16	2017	2018
2.65	1.42	1.05

### Revegetation (in Ha)

2008 - 16	2017	2018
5.62	8.53	15.85







Beach Cleaning



Tree Plantation in Schools

Environmental awareness amongst the community has been another key focus area for the company. It has launched a 'Green School' program to create awareness amongst the children through tree plantation activity. The company has been periodically carrying out beach cleaning programs with participation from village chief and community leaders.

The company has been awarded a Blue PROPER Certificate by the Ministry of Environment (KLH) for putting exemplary efforts in the area of environmental management in FY'17-18. It aspires to get Green Proper Certificate next year.



	No	Programs	Estimated number of People Benefits the Programs	Benefits for community
HEALTH	1	Scholarship	44 students	Increase number of University/College graduate in Bunyu/Kaltara and thus contribute to the province Human Development Index (HDI)
	2	School Bus	2 villages	Improve road safety as for students.
	3	Leveraging Teacher's Competency	64 teachers	Improve Bunyu Teacher's quality hence increase the total province HDI
	4	Laboratory School Support	SMAN 1 Bunyu (150 students)	PraktekFisika, Kimia
	5	Student Internships	59 students	Improve quality of Practical Skills of the Vocational Students
	6	School Rehabilitation	5 schools (250 students)	Kantinsekolah,perumahan guru, PAUD,BangkuSekolah
	7	Student Achievement Appreciation	200 students	Motivation for students
	8	Student Quiz Contest	50 students of Primary S Gn.Daeng	Health positive competition atmosphere amongst students in Bunyu
EDUCATION	1	Baby Milks Distribution	1728 babies	Improve nutrition supply of baby below 5 years old.
	2	Rod Watering	2 villages at Gn.Daeng (75 houses)	Dust suppressionas an attempt to reduce Upper Respiratory Infection incidents
	3	Youth Sport Sponsorship	150 persons	Promote sport and healthy activities for the youth.
	4	Mass Circumcision	110 children (3 kali)	Public health standard
	5	Clean Water Supply.	2 villages at Gn.Daeng	Clean water supply for public to improve public health standard.
	6	Dengue Fever Prevention	3 villages in Bunyu	Minimize dengue fever incidences
	7	Speedboat Ambulance	All Bunyu people	Community access to the better medical facilities in Tarakan in case of Emergency
ENVIRONMENT	1	Clean Beach	All Bunyu People	Clean beach can be used as recreation place for Bunyu inhabitants
	2	One Million Tree Planting	3 villages in Bunyu	Increase awareness amongst students on importance of green environment.
	3	Green School	250 people	Provide greener environment for the schools which will support quality of their learning, while increasing awareness in keeping environment.
	4	Recreation Facility of Nibung Beach	100 people	Refreshing, familiy gathering

	No	Programs	Estimated number of People Benefits the Programs	Benefits for community
ECONOMIC	1	Water Refill Station (2200 liter)	50 households at Gn. Daeng	Support economic activity while providing clean and affordable drinking water for people.
	2	Modern Fishing Method	30 fishermen	Improve skills whilst income of fishermen
	3	Aquaponic & Hydroponic	60 farmers	Introduce an efficient method on fishery and vegetable farming which will benefit financially as well as for people nutrition.
RELIGION & CULTURAL	1	Religious Day Celebration	3 villages in Bunyu	Better attitude of the society
	2	Rehabilitation of Mosque/Churches	10 mosques	To ensure appropriate standard of venues for worship.
	3	Various Donations	3 villages in Bunyu	Support various social activities
	4	Traditional House of Dayak Tidung	All Bunyu People	Preserve Cultural Heritage & To be used for social functions.
INFRASTRUCTURE	1	Public Road Maintenance	3 villages in Bunyu	Maintain good standard of public facilities.
	2	Bridge Rehabilitation	East Bunyu Village	Maintain good standard of public facilities.
	3	Deep Weel	10 households	More source of clean water.
	4	Clean Water Treatment	All Bunyu People	Clean water supply for households.
ENTERTAINMENT	1	End Year & New Year Gathering	All Bunyu People	Provide Entertaining Event
	2	Independence & National Days	All Bunyu People	Support during celebration Independence Day and other National Holidays



## Awards

S.No.	Award	Year	Organisation
1	FIMI Award for a Socio-Economic upliftment of communities	2017-2018	Federation of Indian Mineral Industries
2	Award for Social Responsibility Communication	2018	Association of Business Communicators of India
3	Greentech Award for Environment Management @PEKB	2018	Greentech Foundation
4	Global CSR Award	2018	Energy and Environment Foundation
5	Greentech Safety Award ("Platinum" for Safety Mangement)	2018	Greentech Foundation
6	HR Award ("Gold" for outstanding achievement in Innovation in Employees Retention Strategy)	2018	Greentech Foundation



## Appendix: Conversion Factor

Parameter Conversion	Factor
<b>Energy</b>	
Emission Factor (tCO <sub>2</sub> /MWh)	0.82
Conversion Factor (kWh to GJ)	0.0036
<b>Diesel</b>	
Net Calorific Value (TJ/Gg)	43
Density (kg/L)	0.8325
Conversion Factor (MT to kL)	1.21
Conversion Factor (L to GJ)	0.0358
CO <sub>2</sub> Emission Factor (kg CO <sub>2</sub> e/TJ)	74100
CH <sub>4</sub> Emission Factor (kg CO <sub>2</sub> e/TJ)	3
N <sub>2</sub> O Emission Factor (kg CO <sub>2</sub> e/TJ)	0.6
Global Warming Potential of Methane	28
Global Warming Potential for N <sub>2</sub> O	265
Fugitive CH <sub>4</sub> Emission Factor from Surface Mining, m <sup>3</sup> /tonne	1.2
CO <sub>2</sub> Emission Factor from Trucks, g/Km	837.5
GHG Emission Factor from Rail Transport, kg CO <sub>2</sub> /tonne Km	0.00996

## References

CEA Database ver. 12 (Average margin)

<https://www.aqua-calc.com/convert/power/kilowatt-to-gigajoule-per-hour>

2006 IPCC Guidelines for National GHG Inventories, Chapter 1 Introduction

<https://bharatpetroleum.com/Our-Businesses/I&C/Industrial-Fuel-Products/Fuels.aspx>

<https://www.bharatpetroleum.com/our-businesses/industrial-&-commercial/conversion-table.aspx>

Calculated - (NCV\*Density/1000)

2006 IPCC Guidelines for National GHG Inventories, Chapter 4 Stationery Combustion

Intergovernmental Panel on Climate Change (IPCC) - 2006 Database

Bureau of Energy Efficiency

<https://www.aqua-calc.com/calculate/volume-to-weight>

<https://corporate.renault-trucks.com/media/document/DP-pdf/greenhouse-gas-emissions-report.pdf>

[https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors\\_mar\\_2018\\_0.pdf](https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf)

<http://www.gasindia.in/technical-specification.html>

IPCC Fifth Assessment Report, AR5

ARAI Emission Factor Developed for CPCB

API Compendium 2009 Table 4-3

### Abbreviations :

AEL	Adani Enterprises Limited
CSR	Corporate Social Responsibility
FMCG	Fast Moving Consumer Goods
GHG	Green House Gas
GIS	Geographic Information System
HEMM	Heavy Earth Moving Machines
IPCC	Inter-Governmental Panel on Climate Change
ICM	Integrated Coal Mangement in abbreviations
MDO	Mine Developers and Operators
MMT	Million Metric Ton
MMTPA	Million Metric Ton Per Annum
PEKB	Parsa East and Kanta Basan Coal Block
ROM	Run-of-Mine
SEBI	Securities and Exchange Board of India
SEZ	Special Economic Zone



## GRI Content Index

GRI Standard 2016	Disclosure	Page Nos.
102-1	Name of the Organization	10
102-2	Activities, Brands, Products, and Services	10-13
102-3	Location of Headquarters	Back Cover
102-4	Location of Operations	12
102-5	Ownership and Legal Form	10-11
102-6	Markets Served	10-13
102-7	Scale of the Organization	10-13;26; 42-43
102-8	Information on Employees and Other Workers	42-43
102-9	Supply Chain	31-32
102-10	Significant Changes to the Organization and its Supply Chain	There has been no significant changes in the location of suppliers and structure of supply chain during the reporting year.
102-11	Precautionary Principle or Approach	23
102-12	External Initiatives	We do not subscribe to any external Initiatives
102-13	Membership of Associations	Annual Report, Page 100
102-14	Statement from Senior Decision-Maker	7-8
102-16	Values, Principles, Standards, and Norms of Behavior	24
102-18	Governance Structure	15; 20-21
102-40	List of Stakeholder Groups	16
102-41	Collective Bargaining Agreements	NA, No labour unions
102-42	Identifying and Selecting Stakeholders	16-19
102-43	Approach to Stakeholder Engagement	16-19
102-44	Key Topics and Concerns Raised	16-19
102-45	Entities Included in the Consolidated Financial Statements	5
102-46	Defining Report Content and Topic Boundaries	16-19
102-47	List of Material Topics	18-19
102-48	Restatements of Information	6
102-49	Changes in Reporting	5-6
102-50	Reporting Period	5-6
102-51	Date of Most Recent Report	5-6
102-52	Reporting Cycle	5-6
102-53	Contact Point for Questions Regarding the Report	5-6
102-54	Claims of Reporting in Accordance with the GRI Standards	5-6
102-55	GRI Content Index	59-62
102-56	External Assurance	63-64

Material Topic	Disclosure	Page Nos.
----------------	------------	-----------

#### Anti Corruption

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	23-24
	103-2: The management approach and its components	23-24
	103-3: Evaluation of the management approach	23-24
205: Anti-corruption	205-3: Confirmed incidents of corruption and actions taken	23-24

#### Economic Performance

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	25-26
	103-2: The management approach and its components	25-26
	103-3: Evaluation of the management approach	25-26
201: Economic Performance 2016	201-1: Direct economic value generated and distributed	26

#### Indirect Economic Impact

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	46-52
	103-2: The management approach and its components	46-52
	103-3: Evaluation of the management approach	46-52
203: Indirect Economic Impact 2016	203-1: Infrastructure investments and services supported	46-52

#### Energy

GRI 103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	34-36
	103-2: The management approach and its components	34-36
	103-3: Evaluation of the management approach	34-36
GRI 302: Energy 2016	302-1: Energy consumption within the organization	35

Material Topic	Disclosure	Page Nos.
----------------	------------	-----------

**Water**

GRI 103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	34-36
	103-2: The management approach and its components	34-36
	103-3: Evaluation of the management approach	34-36
GRI 302: Energy 2016	303-1: Water withdrawal by source	35-36

**Emissions**

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	33-35
	103-2: The management approach and its components	33-35
	103-3: Evaluation of the management approach"	33-35
305: Emissions 2016	305-1: Direct (Scope 1) GHG emissions	35
	305-2: Energy indirect (Scope 2) GHG emissions	35

**Biodiversity**

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	36-39; 54-55
	103-2: The management approach and its components	36-39; 54-55
	103-3: Evaluation of the management approach	36-39; 54-55
304: Biodiversity 2016	304-1: Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	36-39; 54-55
	304-4: Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	36-39; 54-55

**Effluents and Waste**

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	35;39
	103-2: The management approach and its components	35;39
	103-3: Evaluation of the management approach	35;39
306: Effluents and Waste	306-2: Waste by type and disposal method	35;39



Material Topic	Disclosure	Page Nos.
----------------	------------	-----------

#### Environmental Compliance

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	33-34
	103-2: The management approach and its components	33-34
	103-3: Evaluation of the management approach	33-34
GRI 307: Environmental Compliance 2016	307-1: Non-compliance with environmental laws and regulations	23-24

#### Employment

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	42-46
	103-2: The management approach and its components	42-46
	"103-3: Evaluation of the management approach"	42-46
401: Employment 2016	401-1: New employee hires and employee turnover	42-46

#### Occupational Health & Safety

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	27-30
	103-2: The management approach and its components	27-30
	103-3: Evaluation of the management approach"	27-30
403: Occupational Health & Safety 2016	403-2: Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	27-30

#### Training and Education

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	44
	103-2: The management approach and its components	44
	103-3: Evaluation of the management approach"	44
404: Training and Education 2016	404-1: Average hours of training per year per employee	44
	404-3: Percentage of employees receiving regular performance and career development reviews	44

Material Topic	Disclosure	Page Nos.
----------------	------------	-----------

**Local Communities**

103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	46-47
	103-2: The management approach and its components	46-47
	103-3: Evaluation of the management approach	46-47
413: Local Communities 2016	413-1: Operations with local community engagement, impact assessments, and development programs	46-52

**Socioeconomic Compliance**

GRI 103: Management Approach 2016	103-1: Explanation of the material topic and its boundaries	23-24
	103-2: The management approach and its components	23-24
	103-3: Evaluation of the management approach	23-24
GRI 419: Socio-economic Compliance 2016	419-1: Non-compliance with laws and regulations in the social and economic area	23-24

## Independent Assurance Statement:

### Introduction:

TÜV Rheinland India Private Ltd, member of TÜV Rheinland Group, Germany (TÜV, We) has been entrusted by the management of Adani Enterprises Limited-Mining Business (AEL, the Company), to conduct independent assurance of AEL 2017-18 Sustainability Report, (the Report) of its India and Australia mining business activities. All contractual contents for this assurance engagement rest entirely within the responsibility of AEL. Our task was to give a fair and adequate judgment on the AEL Report.

The intended users of this assurance statement are stakeholders having relevance to AEL overall sustainability performance and impacts of its business activities during 1<sup>st</sup> April 2017 – 31<sup>st</sup> March 2018. TÜV Rheinland is a global service provider of CSR & Sustainability Services in over 69 countries, having qualified professionals in the field of Corporate Sustainability Assurance, Environment, Social and Stakeholder Engagement. We have maintained complete impartiality and independence during the assurance engagement and were not involved in the preparation of report contents.

### Assurance Standard:

The Independent Assurance was carried out in accordance with related standards such as Global Reporting Initiative (GRI) Standard (2016), AccountAbility, U.K Standard AA1000AS (2008) with 2018 addendum, AA1000AP (2018), AA1000 SES (2015), Principles of Inclusivity, Materiality & Responsiveness and TÜV Rheinland internal protocol on Assurance of Sustainability reporting/ disclosures.

### Scope & Type of Assurance:

Our assurance engagement covers the following:

- AEL corporate sustainability performance and according disclosure on management approach (DMAs) covering 14 material aspects & 50 sustainability performance disclosures from category of economic, environment and social.
- Evaluation of disclosed information in the report as per the Assurance Standards.
- Type-1, Moderate as per AA 1000 AS (2008) with 2018 addendum.

**Limitation:** The assurance engagement was carried out at AEL Corporate office: 83 Adani House, Institutional Area, Sector-32, Gurugram, Haryana 122001, India. and discussion with concerned employees of its major sustainability functions. We have not observed any significant situations to limit our assurance activity. The verification is carried out based on the data and information provided by AEL, assuming they are complete and true. We did not verify the reported financial data as same is verified by another third party.

### Assurance Methodology:

TÜV has challenged the report contents and assess the process undertaken by AEL from source to aggregate in disclosure of information/data related to their sustainability performance. Our judgment is based on the objective review of reported information as per criteria defined under Assurance standards.

Analytical methods and the performance of interviews as well as verification of data, done as random sampling, to verify and validate the correctness of reported data and contents in light of contractual agreement and the factual AEL sustainability strategy & framework as mentioned in the report. Our work included consultation with over 15 AEL representatives including senior management and relevant employees at corporate office and mining site of Parsa East and Kanta Basan. The consultations with external stakeholders were not carried out. The approach deemed to be appropriate for the purpose of assurance of the report since all data therein could be verified through original proofs, verified database entries.

The Assurance was performed by our multidisciplinary team of experienced professionals in the field of Corporate Sustainability, Environment, Social and Stakeholder Engagement. We are of the opinion that our work offers a

sufficient and substantiated basis to enable us to come to a conclusion mentioned below and based on the content of our contract.

### **Adherence to AA 1000 principles:**

**Inclusivity:** AEL has identified, prioritize and engaged with its internal and external stakeholders (customers, suppliers, local community in project affected area, government authorities, shareholder) through formal and informal mechanism like "Public hearing" dated 29.10.2017 at village Basen, tehsil-Udaypur, district-Sarguja as a response to sustainable development issue.

**Materiality:** AEL has identified and prioritized the material issues considering perspective of identified major stakeholders based on "Impact" related to sustainable development viz. economic, environment & social performance and provide balance information in the report.

**Responsiveness:** AEL has responded to its stakeholders against identified material issues critical to sustainable development through disclosure made in report 2017-18, its sustainability strategy & framework, policies, implementation systems and processes, allocation of resources to stakeholder engagement and communication.

### **Conclusion:**

In conclusion, we can mention that no instances or information came to our attention that would be to the contrary of the statement made below:

- AEL 2017-18 sustainability report meets the requirement of Type-I, Moderate Assurance according to AA1000AS(2008) with 2018 addendum and GRI standard (2016).
- The Report includes statements and claims that reflects AEL achievements and challenges supported by documentary evidences and internal records
- The performance data we found in the report are collected, stored and analyzed in a systematic and professional manner and were plausible.
- TÜV Rheinland shall not bear any liability or responsibility to a third party for perception and decision about AEL based on this Assurance Statement.

For TÜV Rheinland India Pvt. Ltd.



Ganga Charan SHARMA, Lead Verifier

New Delhi

28<sup>th</sup> March, 2019





