

# DUPONT SUSTAINABLE SOLUTIONS EMEA NEWSLETTER

## SOCIETY, SUSTAINABILITY, SAFETY

Sustainability has become a focal topic for many businesses. Beyond our efforts to improve energy efficiency and reduce our environmental footprint, what role does our effect on society and local communities play in relation to sustainability? That is a question DuPont Sustainable Solutions tackles in this newsletter - in its report of the packed Executive Forum on sustainable development in mining at the 2014 Mining Indaba and in an article previously printed in the Environmental Leader.

We wouldn't be who we are if we left out safety. We review our planning for an investigation of near misses in a report of an incident in an underground mine, and a case study gives an insight into how Rio Tinto Alcan achieved dramatic safety improvements during major projects. This issue of our newsletter may appear to focus mainly on mining, but the nature of the question we face remains the same. How to improve safety and sustainability performance? This newsletter considers various approaches, which may also be relevant to your business.

For further information about us, we invite you to visit our DSS EMEA website: [www.sustainablesolutions.dupont.co.uk](http://www.sustainablesolutions.dupont.co.uk)

### SAFETY CONTACT



#### Near Misses – An Incident Report from the Mining Industry

The sense of relief after a near miss accident is palpable. However, it should also trigger questions about current safety practices. Here we report on a near miss investigation after a visit to a client's underground mine.

### FEATURE VIDEO



#### How can the mining industry maintain momentum in sustainable development?

The challenges, changes, projections and solutions for sustainable development as discussed by a panel of experts during the DuPont Executive Forum at Mining Indaba 2014.

### FEATURE ARTICLE



#### The link between good business and society

Instantaneous global communication systems mean company fortunes can stand and fall in a matter of minutes. Boost your brand, reputation and business results by using best sustainability practices to create value for local communities.

### CASE STUDY



#### Rio Tinto Alcan Case Study

A change in incident investigation, new standards and a cultural shift lead to a reduction in the All Injury Frequency Rate of 31 per cent.

### NEWS AND EVENTS



#### News and Events

For the latest stories and upcoming events, follow the link to find out what we have done and are planning. Read about our new Operational Risk Management solution, the OpEX conference in Russia, upcoming Safety Management Days organised by DuPont and recent awards won by our business.

## SAFETY CONTACT

### Near Misses – An Incident Report from the Mining Industry

In The mining industry is one that is beset by a range of very grave risks. From ground or strata failure to fires and explosions, flooding, dam failures and the general risks associated with lifting, working at heights and in confined spaces, the list is long. Often, safety incidents are not confined to minor events, but result in large-scale catastrophes such as the Wangjialing coal mine flood in China in 2010 or the cave-in in Copiapó, Chile in the same year.

That is why DuPont Sustainable Solutions works with many mining companies to mitigate safety risks. However, even in the early stages of our assessment work, we and our employees encounter serious hazards.

Some time ago, a DuPont project manager visited an underground mine together with a client. The project manager wanted to become familiar with the environment and to understand how the client operated. Both the DuPont consultant and the client production manager spent the morning visiting the site, walking around underground and left at 1 pm. Half an hour later, there was a fall of ground. One of the client's employees was fatally injured, another fractured both his legs.

The first questions we at DuPont ask ourselves in such an event, after ensuring that all our people safe, are: Could we have done more to protect our people? If the timing had been different could one of our people have been involved?

Any near miss that involves one of our employees triggers an incident investigation. As much as it remains the client's responsibility to ensure the safety of any DSS consultant, the consultant also has the full right to question the safety of any condition or area. The results of incident investigations, such as this one, help us to avoid future risks to our staff and other people.

We know that ground or strata failures have four root causes: improper design, poor installation, ground/support deterioration and seismic events. In this instance, the fall of ground was due to poor operating conditions in terms of ground water that were identified, but not corrected. As DuPont Sustainable Solutions, we have since been involved in rolling out the DSS DnA leadership development programme to assist leaders in developing their safety leadership competencies in such a way that these type of unsafe conditions will not be condoned, allowed or remain uncorrected.

All the procedures we, at DuPont Sustainable Solutions, put in place prior to client site visits, such as the project risk sheet, the induction training, awareness of additional risks, are designed to ensure that we always bring all our people home safely.

## MINING INDABA EVENT

### How can the mining industry maintain momentum in sustainable development?

On 5 February, DuPont Sustainable Solutions held an Executive Forum at the 2014 Mining Indaba in Cape Town, South Africa. Attended by 200 senior industry delegates, the event considered the preconditions that need to be fulfilled for sustainable change to take place in the mining industry. The expert panel included **Sheila Khama**, Director of the African Center for Natural Resources from the African Development Bank, **Michael Fahrbach**, Head of Sustainability for Glencore Xstrata, **Mark Munroe**, Executive Vice President of the Lonmin PLC Mining Division and **Kate Carmichael**, Manager of Social and Economic Development at the International Council on Mining and Metals. Moderated by **Simon Herriott**, Managing Director of Global Consulting Solutions at DuPont Sustainable Solutions, the discussion highlighted the importance of the social licence to mine, the complexities of the industry's footprint, its effect on the environment and communities and the solutions that not only address the challenges of today, but also those of the future. To find out more, follow the link below to watch a short video and [read a summary of the event](#).



Watch the video here: <http://youtu.be/A18LrzaoyqY>

## MINIMISE SOCIAL IMPACTS – OPTIMISE SOCIAL VALUE CREATION IN THE ASSET LIFECYCLE

When reading the daily headlines, it is not uncommon to find news about a company behaving badly. Check today's top stories and there is probably an investigation, an executive gaffe or a serious disaster which has both business and societal costs. Increasingly, companies are being perceived as a major cause of our social, environmental and economic issues. Big banks, big oil, big mining, big insurers – companies in these industries are perceived to be prospering at the expense of others. The legitimacy of business is being called into question. This is compounded by increased industry oversight into business and management practices, both driven by regulation and expectation.

Communities increasingly expect companies to do the right thing – to act responsibly and keep societal well-being in mind. Consumers expect businesses to provide safe working conditions, respect the environment and support social development. Research shows people are more likely to engage with a brand or a company if it is doing something good for society.

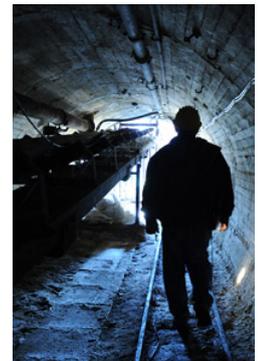
We live in an era of new transparency and visibility. Now, consumers can turn to social media to provide feedback on a product or service. What's more, a company's integrity can be jeopardised by a Facebook post or tweet; consumers are eager to express their anger and dissatisfaction when companies are perceived to not be acting responsibly or in their best interest.

This poses an opportunity and a challenge for the business community. How should businesses be working with society, looking beyond profit, and focus on generating value for people and the planet?

### Creating Shared Value

The ideal of building responsible business practices has been around for a long time. In 1962, Milton Friedman declared there was only one social responsibility of business – to meet shareholder expectations and profits. Businesses could pursue practices with a social good angle in mind, as long as they generated profit. Later, in 1984, Edward Freeman introduced his corporate management theory, which asserted that other stakeholder interests – like communities and employees – should be valued just as much as shareholder interests when considering best business practices.

In 2011, the Harvard Business Review published a thought leadership article by Michael Porter and Mark Kramer<sup>[1]</sup> that introduced the concept of “shared value,” which is “creating economic value in a way that also creates value for society by addressing its needs and challenges. Businesses must reconnect company success with social progress. Shared value is not social responsibility, philanthropy, or even sustainability, but a new way to achieve economic success. It is not on the margin of what companies do, but at the centre.”



For companies to thrive, the communities in which they operate must thrive. Businesses must manage the risks and seize the opportunities associated with their activities, particularly within the context of developing countries – local communities are the customer base, the local suppliers, and the talent pool. Companies must be in tune with societal needs, and to be successful, companies must fully understand their impact on local society and execute a defined action plan to address them – in line with their business strategy.

To manage and to create shared value, companies must be able to measure it on all dimensions: business value and societal value, short and long-lasting effects, intended and unintended, positive and negative. Also important is a clear communications strategy, both for investors and the wider public, which articulates and promulgates the contribution to society, thereby facilitating the building of positive relationships with all stakeholders.

### Understanding Impacts

In DuPont, we take a broad perspective, going beyond just inputs and outputs to evaluate long-term outcomes of company activities and its presence in essential domains of societal progress. Social value creation is pursued through a clear management process focused on understanding and driving the triple bottom line impact – ensuring that the long-term outcomes for local societies are considered and included when measuring business success.

The business contribution to society can be assessed according to six domains of societal progress:

- Enterprise development
- Infrastructure development
- Governance
- Community development
- Quality of life
- Ecosystem conditions

To gain further insight into determining impact, we worked with the World Business Council for Sustainable Development to build the Measuring Impact Framework and further developed a Societal Value Management Model. This model was created to help companies articulate local development strategies that best meet business and stakeholder expectations and includes a broad scope of analysis. The model is used as a management tool throughout the asset lifecycle to drive investment decisions and is instrumental in stakeholder engagement to improve transparency and communication. This model is currently rolled out internally and externally, to companies across a variety of industries with a desire to integrate the social value management in their business practices.

To measure and achieve maximum social value, companies should consider focusing on the four main pillars of the asset life-cycle:

- Capital project management, to create competitive advantage by mitigating the social impacts and optimising local input;
- Local procurement processes, to build economic and societal value in the local communities;
- Supplier development, to create a sustainable local supply chain and equip local businesses for self-sustained economic growth;
- Capability development, to integrate the indigenous workforce into business performance; and
- Community development, to improve social infrastructure and access to services for the local population.

In each area, companies must define a long term strategic view, define objectives and set out clear implementation plans. The next step is to check these plans are being followed by consistent monitoring. Monitoring should take place both, quantitatively, with a series of targeted metrics, and qualitatively, through stakeholders consultation.

## Putting Principles into Practice

There are countless opportunities to put social value into action. In several industries, social value management is considered an urgent, and sometimes even requisite, practice. In developing countries, oil and gas companies are under increasing pressure from local governments to provide solutions that are sustainable for society, in addition to their businesses. Mining companies also are anticipating increasing regulations and expectations to minimise impact on local communities.

In Denmark, DuPont was exploring possible energy savings when it discovered that during the production phase at its Grindsted plant, surplus heat was coming from the cooling towers. The energy team decided to leverage the surplus by distributing it to the Grindsted Electricity and Heating Plant (GEV). GEV delivers heat and electricity to private households and other buildings in Grindsted, where it is used for water and space heating during the winter. District heating is common in most cities in Denmark, as they are densely populated with little sprawl. This makes it possible to produce heat efficiently and subsequently supply this to customers through a network of insulated pipes. The project provided GEV an estimated heat energy supply of 12,627 MWh, enough to power 900 homes in the community. This generated savings of 1,200,000 Nm<sup>3</sup> in natural gas at GEV and 195 MWh in electricity at the Grindsted plant. In terms of carbon footprint, this is equivalent to a reduction of 2,700 tons (MT) CO<sub>2</sub> at GEV and 70 tons CO<sub>2</sub> at the Grindsted site.

We have established Community Advisory Panels at nearly every global site we operate, ensuring that the frequency and type of community engagement are tailored to the individual conditions of each location. We also established wider mechanisms for funding local partnerships, such as the DuPont Community Fund. Founded in 1990, the fund has provided financial support to more than 500 global projects addressing sustainability, social progress, economic success or environmental excellence.



Managing a company’s contribution to society in a way that builds growth and well-being for present and future generations can only be achieved with a systemic strategic approach to social value creation. This effort and forethought can be translated into a significant competitive advantage, a stronger brand and improved reputation.

Angela Fratila is in the Sustainability and Social Value Creation Practice with DuPont Sustainable Solutions.

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[1] Porter, Michael and Kramer, Mark. “Creating Shared Value”. Harvard Business Review. January 2011

## RIO TINTO ALCAN MAJOR PROJECTS GROUP: A DRAMATIC IMPROVEMENT IN SAFETY CULTURE

Rio Tinto Alcan, Inc. (RTA) is a global leader in aluminium production. RTA was created in 2008 when Rio Tinto acquired Alcan Inc. The RTA global head office is located in Montreal, Canada. The Major Projects Group division (MPG) focuses on construction services for large-scale projects within Rio Tinto Alcan. Since 2000, Alcan had been steadily improving its safety performance on its construction projects. As an example, in 2008 Alcan had completed its latest project with an all injury frequency rate in the range of 4.0 versus the construction industry average in Québec of greater than 20.0. Following the acquisition by Rio Tinto, RTA wanted to accelerate Alcan's performance improvement, so MPG approached DuPont Sustainable Solutions (DSS) in late 2008 to assess RTA's newly combined contractor safety management system.

DSS completed safety assessments at three of RTA's project sites in Canada. The DSS team gauged RTA's current safety management system against industry best safety practices, and in early 2009 issued its recommendations for improvements. Shortly after in May 2009, one site experienced a series of safety-related incidents and shut down construction activity for 3 days. Following the site's Safety Stand Down, DSS provided coaching and short-term assistance to project line management at two sites since both sites were using some of the same contractors.



### Pursuing Industry Best Practices

The initial assessment included comparing RTA's current construction safety management system and resources to DuPont's proven 12 Essential Elements of Safety Management, the DuPont 6-Step Contractor Safety Management Process reference model, and to Rio Tinto's own 17 element HSEQ MS (Health, Safety, Environment and Quality Management System). The DuPont and RTA Safety Management System reference models each emphasise leadership, structure, processes and actions.

Based upon the comparative assessment, DSS reported the degree of competency in each process, and then provided RTA with initial coaching and counselling at both the corporate and project site levels.

The DuPont recommendations for transforming RTA's contractor safety management system included:

- Creating an overall safety management structure (an HSE Council and Process Improvement Teams) in which top leadership actively manages the key safety activities required to achieve world-class safety performance.

- Engaging all management and both RTA and contract employees in the Rio Tinto HSE Interaction Process (safety observations and discussions) and in Take 5 (risk identification and management for workers).

- Strengthening the company's incident investigation process and create a field guide (focused on what to do when an incident occurs), and implement a training process to improve the skills of local line management personnel.

- Developing a Construction HSE execution manual, specified within the terms of all contracts, ensuring enforceable performance standards to which all contractors must comply.

### Creating a "Playbook"

As part of the transformation, DSS recommended appointment of Project Directors to lead the Process Improvement Teams (PITs). The teams are composed of representatives from each project with a mandate to identify best practices, develop processes and systems that are acceptable to all and to support the implementation of these tools on their respective projects. The identification and use of these best practices and safety management tools help create robust safety standards and a RTA project playbook for future projects. The primary objective is to create a usable reference model that will eliminate reinventing processes and standards whenever a new project starts.

### Transformative Results

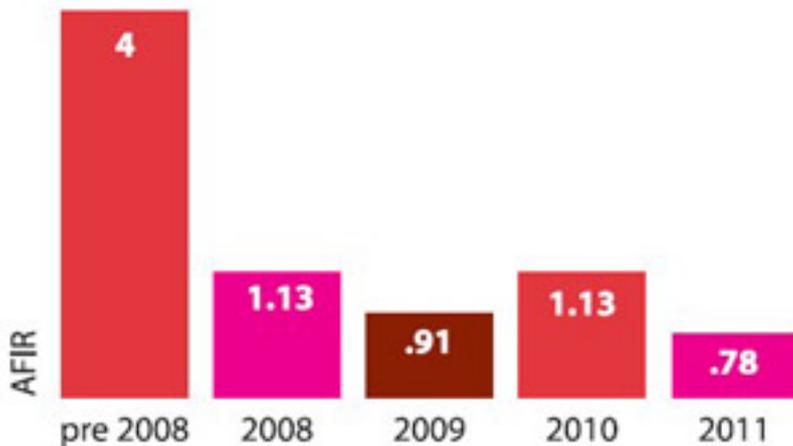
Rio Tinto Alcan has undergone a remarkable safety transformation by implementing the Rio Tinto HSEQ management system supported by DuPont best practices and consultants. The step-change for RTA was a clear philosophical shift from a

pure EPCM (Engineering, Procurement & Construction Management) model to one where the owner is actively engaged in setting the safety standards. The change happened progressively and the desired results were achieved.

Some of the most significant changes were improvements in incident investigations, the development of clear, uniform standards, and the use of behaviour-based safety interactions as a tool for cultural change. In addition, a much more robust contractor pre-selection process was established, with enforceable HSE requirements built into the contract templates.

### Safety Performance Improves

Since working with DSS, the safety performance at all RTA sites has improved dramatically. In 2011, RTA achieved an impressive 31% improvement in its All Injury Frequency Rate over the prior year (0.78 v. 1.13).



\*AIFR = All Injury Frequency Rate

Moreover, since the end of May 2010, the Shipshaw project has experienced 26 consecutive months without a single recordable injury. That equates to over 850,000 man hours. In addition, under the strong safety leadership of its director, Mr Alain Gaboury, the site went from the worst performing RTA project site to the best, and its achievement was recognised with the Rio Tinto CEO Safety Award.

### SUCCESS STORY: A True Cultural Shift

One year into the RTA project, a few of the contractors' employees had a 3-week hiatus before starting the next portion of another contract. While on site with the project director conducting a regular safety observation, the DuPont consultant participated in a conversation with two workers.

They told him that during the hiatus, they were hired at a local industrial establishment on a maintenance turnaround that was supposed to last over a week. However, after two days, they quit because they said that it was so unsafe compared to the RTA construction site that they decided to quit rather than risking injury. This is just one example of the positive impact that a cultural shift can bring to all employees, regardless of industry.

### About Rio Tinto

Rio Tinto is a leading international mining group headquartered in the UK, combining Rio Tinto plc, a London and NYSE listed company, and Rio Tinto Limited, which is listed on the Australian Securities Exchange.

Rio Tinto's business is finding, mining, and processing mineral resources. Major products are aluminium, copper, diamonds, thermal and metallurgical coal, uranium, gold, industrial minerals (borax, titanium dioxide and salt) and iron ore. Activities span the world and are strongly represented in Australia and North America with significant businesses in Asia, Europe, Africa and South America.

## NEWS AND EVENTS

### OPEX Russia & CIS 2014

**April 24-25, 2014 – Moscow, Russia**

The inaugural OpEx Russia & CIS 2014 – Operational Excellence in Oil, Gas & Petrochemicals – will be a highly topical event for the Russian & CIS oil and gas industry. It will focus on achieving operational excellence by optimizing human resources, assets and technology, these being the main pillars on which a successful Operational Excellence strategy should be based.

Brian Rains, Global Operational Excellence Practice Leader, DuPont Sustainable Solutions, will present a special session on April 24th. The topic of his discussion will be Operations Excellence: Achieving Measurable, Synergistic and Sustainable Benefits. It will highlight:

- the need to minimise and manage downside risks
- maximising of all the potential an organisation has (physical assets, technology, human, managing processes)
- how to achieve operational excellence through a comprehensive, systemic improvement process, sustained over time.

» Find out more... (<https://www.europetro.com/en/rusopex2014>)

### ICDT (International Downstream Technology and Strategy Conference)

**May 6-7, 2014 – Lisbon, Portugal**

We look forward to welcoming you during this event for our discussion on “Achieving ultra-low SO<sub>2</sub> emissions from sulphur recovery units” presented by Yves Herssens, Sales Channel and DynaWave® Business Manager, MECS, on Wednesday, May 7 at 10h30.

Explore specific design parameters necessary to achieve ultra-low SO<sub>2</sub> emissions during both normal operation and upset conditions. A U.S. West Coast refinery case study will be presented during this session.

» Find out more... ([http://www.europetro.com/en/idtc\\_2014](http://www.europetro.com/en/idtc_2014))

### Safety management information day: selected tools and solutions for behavioural safety

**May 14, 2014 - Neu-Isenburg, Germany**

During this informative seminar, hosted by the DuPont Neu-Isenburg site, you will learn how DuPont Sustainable Solutions helps companies to develop safe attitudes and behaviours among employees by establishing efficient safety management systems. You will also get an overview of the consulting and training solutions, proven methods and best practices that can help your organisation develop a strong safety culture, health and safety skills, reduce incidents and ultimately improve operational performance.

» Find out more... (<http://www.training.dupont.de/arbeitsicherheit/sicherheitsmanagement-infotag-ausgewahlte-werkzeuge-und-losungen-zur-verhaltensorientierten-sicherheit?cid=dss-eneews>)

### DuPont Seminar: Integrated Management of Occupational Safety

**May 15, 2014 - Katowice, Poland**

It is with great pleasure that we invite you to join us in Poland for this exclusive event in which we will discuss new innovations and approaches towards safety culture transformation and cutting edge methodologies that help achieve a step-change in safety performance.

» Find out more... (<http://www.training.dupont.co.uk/forms/safety-training/0514-pl10-kat-li?cid=dss-eneews>)

## DuPont Sustainable Solutions introduces new methodologies to enhance Operational Risk Management

Global operations management consultancy DuPont Sustainable Solutions has announced the creation of a new suite of scalable methodologies aimed at helping companies to bolster their operational risk management systems. These solutions help companies to address technical skill shortages – an unintended consequence of demographic change – by building capabilities related to proper handling of hazardous materials.

» Find out more...

([http://us.vocuspr.com/Newsroom/MultiQuery.aspx?SiteName=DupontEMEA&Entity=PRAsset&SF\\_PRAsset\\_PRAssetID\\_EQ=127866&XSL=NewsRelease&IncludeChildren=True&Lang=English](http://us.vocuspr.com/Newsroom/MultiQuery.aspx?SiteName=DupontEMEA&Entity=PRAsset&SF_PRAsset_PRAssetID_EQ=127866&XSL=NewsRelease&IncludeChildren=True&Lang=English))

## DuPont Indonesia receives sustainable business award

DuPont Agricultural Products Indonesia (DAPI) has been awarded the 2013 Sustainable Business Award (SBA) in the Biodiversity category. Representing two factories DAPI, Sidoarjo and Pasuruan, George Hadi Santoso, Indonesian DuPont Country Manager, received the award from Armida Alisjahbana, State Minister of National Development Planning during the Business for the Environment Summit (B4E) held in Jakarta.

» Find out more...

(<https://inside.dupont.com/Lists/Articles/DispForm.aspx?ID=1734&Category=Network%20News&Subcategory=AP>)

## DuPont and the resolution project partner to support young leaders launching innovative social ventures

Global Partnership to Support the Next Generation of Leaders

» Find out more...

([http://us.vocuspr.com/Newsroom/MultiQuery.aspx?SiteName=DupontEMEA&Entity=PRAsset&SF\\_PRAsset\\_PRAssetID\\_EQ=128180&XSL=NewsRelease&IncludeChildren=True&Lang=English](http://us.vocuspr.com/Newsroom/MultiQuery.aspx?SiteName=DupontEMEA&Entity=PRAsset&SF_PRAsset_PRAssetID_EQ=128180&XSL=NewsRelease&IncludeChildren=True&Lang=English))

## DuPont named among the world's "most admired companies" by fortune magazine for 5th consecutive year

DuPont is among the world's Top 50 most admired companies for the 5th consecutive year, according to a study released today by FORTUNE magazine.

» Find out more... (<http://www.reliableplant.com/Read/23241/Fortune-DuPont-most-admired>)