# RESPONSABILIDAD SOCIAL EMPRESARIAL: ¿INVERSION O GASTO?

Por: Jose A. Botin

Departamento de Ingeniería de Minería Pontificia Universidad Católica de Chile

## **OBJETIVOS**

- 1. Enfoque conceptual
- 2. RSE: Un concepto controvertido
- 3. El negocio de sustentabilidad: ¿Nuevo paradigma?

## LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA

- 1970 RSE es maximizar la utilidad- Milton Friedman
- 1987 Desarrollo Sustentable: Brundtland
- **1992** SME Mining Engineering Handbook 2<sup>nd</sup>
- 1997 Triple Bottom Line John Elkington
- 1999 Concept de DS en Mineria: BERLIN II UNEP
- 2003 Sustainable Development Framework- ICMM
- **2012** The Business of Sustainability

### The Social Responsibility of Business is to Increase its Profits by Milton Friedman

The New York Times Magazine, September 13, 1970. Copyright @ 1970 by The New York Times Company.

When I have businessmen speak dequently about the "social reportabilities of business in a free-enterprise system." I am reminded of the wonderful line do showed at the age of 70 that he had been speaking prose all his life. The businessmen believe by the profit business in a free-enterprise system." I am reminded of the wonderful line and value of a social encorp. The services of the section of the section

when I not doubleward in the contracting on the contracting power and the second power and power and the

representation "was one of the batter circs of the American Republican. We have a system of checks and balances to separate the legisla the function of positions general function of collecting bases and deministering expected-laws properns and from the judicial function of mediation for of mediation for the function of collecting bases and amening function of mediation for the function of collecting function and from the judicial function of mediation, exceed-law and judicial function of mediation, exceed law and judicial function of mediation, exceed laws and judicial function of mediation for permitting the corporate executive into position and principle. In the proposition of program is a function of mediation for permitting the corporate executive into position process. If the consist in the proposition process is provided in the proposition process. If the consist in the proposition process is the process for "social" judicial function of the proposition process. If the proposition process is the process for "social" judicial function of the proposition process. If the process is not provided in the proposition process. If the process is not provided in the process is not provided in the proposition process. If the process is not provided in the process in the process is not provided in the process in the process is not provided in the process in the process is not provided in the process in the process is not provided in the process in the process in the process is not provided in the process in

process the objectives to be served.

This is the basic reason why the dottrie of "social responsibility" involves the acceptance of the socialist view that political mechanisms, not market mechanisms, are the appropriate way to determine the allocation of scarce re-sources to alternative uses.

On the grounds of consequences, can the corporate executive in fact discharge its alregard "social responsibility" involves the acceptance of the social involves the social responsibility involves the acceptance of the lower price, and the comprehension of the price of the social responsibility involves the social responsibility involves the social responsibility involves the social responsibility in a responsibility in a respect in running his company-in product resident power in the social responsibility in the responsibility in a responsibi

risbility" doc- brine is brought into sharp relief when the doctrine is used to justify wage restraint, the consequence is likely to be wildcat strikes, rank--and-flie revolts and the emergence of strong competitors for

their jobs. We this here the innoic phenomenon that union leaders-at-least in the U.S.-have objected to Government interference with the market for more consistently and courseposity that have business leaders.
The difficulty of exercising Social expossability interference with the grant and proposes. They can do good-but only at their own exposses.
The difficulty of exercising Social expossability interference with the second control of the second control o

rating a reader wino test soliment the size may be templet to meninorate that it is all wall and good to speak of covermments having the responsibility by usar-lessmen is a quicked and surren wing to be other persing contract problems.

Adde from the question of fact-1 shee Adden Smith's selection about the benefits that can be expected from "in" project as of surren wing.

Adde from the question of fact-1 shee Adden Smith's selection about the benefits that can be expected from "in" project as of surrent produces.

Adde from the question of fact-1 shee Adden Smith's selection about the benefits that can be expected from "in" project as of surrent produces.

Adde from the question of fact-1 shee Adden Smith's selection about the benefits that can be expected from "in" project as of surrent produces.

Adde from the question of fact-1 shee Adden Smith's selection and the surrent produces.

Adde from the question of fact-1 shee Adden Smith's selection and the surrent produces.

Added from the question of fact-1 shee Adden Smith's selection and the surrent produces.

Added from the question of fact-1 shee Adden Smith's selection and the surrent produces.

Added from the question of fact-1 shee Adden Smith's selection and the surrent produces.

Added from the question of fact-1 shee Adden Smith's selection and the surrent produces and the surrent produces.

Added from the question of fact-1 shee Adden Smith's selection of fact-1 shee Adden Smith's selection and the surrent produces.

Added from the question of fact-1 shee Adden Smith's selection of fact-1 shee Adden Smith's selection and the surrent produces.

Added from the question of fact-1 shee Adden Smith's selection of fact-1 shee Adden Smith's selection

employees) to contribute against there will b "social" causes fevered by the activists. In-rodar is they succeed, they are again improving base and improved in the base and improving base and improved in the base and improved in the base and improving base and improved in the base

nuclide-headed in matters that are outside their businesses but affect the possible survival of busi-ness in general. This shortsightedness is strikingly exemptified in the calls from many businessmen for wage and price quidelines or controls or income policies. There is nothing that could do more in a brief period to destroy a market system and replace it by a centrally con-trol ed system than effective governmental con-trol of prices and wages instance-instances on measures are consider and instances as one exercised and instances are one exercised and instances. The exercised are one exercised and instances are one exercised and instances

The political principle that underlies the political mechanism is conformly. The ind-vidual must sove a more general social purpose whether that be delimentable to a general social purpose whether they widsh to or not.

Underformately, unaming in ord laway, feeting—the Three are some receptors in with conforming papers unavandables, of 16 not see how one can avoid the use of the political mechanism because it is not seen to see to be continued to be some to require others to contribute to a general social purpose whether they widsh to or not.

Underformately, unaming in ord ways, feeting—the Three are some receptors in with or conforming papers unavandables, of 16 not see how one can avoid the use of an avoid paper of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not differ in principle of the political mechanism to every human activity. It does not not not not not active to be one, but in the political mechanism to every human a

...in a free society, "there is one and only one social responsibility of business—to use it resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.

## LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA

- 1970 RSE es maximizar la utilidad- Milton Friedman
- 1987 Desarrollo Sustentable: Brundtland
- **1992** SME Mining Engineering Handbook 2<sup>nd</sup>
- 1997 Triple Bottom Line John Elkington
- 1999 Concept de DS en Mineria: BERLIN II UNEP
- 2003 Sustainable Development Framework- ICMM
- **2012** The Business of Sustainability

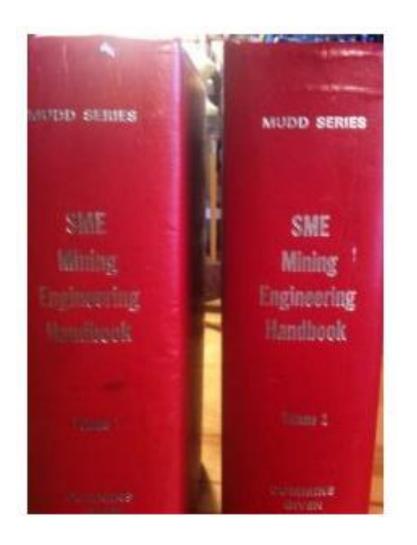
## SUSTAINABLE DEVELOPMENT

To meet the needs of the present generation without undermining the capacity of future generations to meet their needs"



## LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA

- 1970 RSE es maximizar la utilidad- Milton Friedman
- 1987 Desarrollo Sustentable: Brundtland
- **1992** SME Mining Engineering Handbook 2<sup>nd</sup>
- 1997 Triple Bottom Line John Elkington
- 1999 Concept de DS en Mineria: BERLIN II UNEP
- 2003 Sustainable Development Framework- ICMM
- **2012** The Business of Sustainability



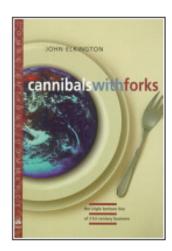
No cita los términos "Sustentabilidad" y "desarrollo sustentable" en sus 2000 paginas

SME Mining Engineering Handbook 2<sup>nd</sup> Ed. 1992

## LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA

- 1970 RSE es maximizar la utilidad- Milton Friedman
- 1987 Desarrollo Sustentable: Brundtland
- **1992** SME Mining Engineering Handbook 2<sup>nd</sup>
- 1997 Triple Bottom Line John Elkington
- 1999 Concept de DS en Mineria: BERLIN II UNEP
- 2003 Sustainable Development Framework- ICMM
- **2012** The Business of Sustainability

#### Cannibals with forks: the triple bottom line of 21st century business





New Society Publishers, 01-01-1998 - 407 páginas

In Cannibals with Forks, Elkington convincingly argues that future market success will often depend on a company's ability to satisfy not just the traditional bottom line of profitability, but also the two emerging bottom lines -- one focusing on environmental quality, the other on social justice.

## El paradigma 3BL de Elkington

Las obligaciones sociales y medioambientales de la empresa deben ser medidas, calculadas, reportadas y auditadas, exactamente igual que lo es el resultado financiero de cualquier empresa pública cotizadahasta

Hasta hoy, nadie ha propuesto la metodología "contable" para calcular una "utilidad neta" social o medioambiental.

Hoy, 3BL no es mucho más que el compromiso de publicar anualmente un "Informe de Sustentabilidad" en el que la empresa recopila datos medioambientales y sociales que considera relevantes

## LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA

- 1970 RSE es maximizar la utilidad- Milton Friedman
- 1987 Desarrollo Sustentable: Brundtland
- **1992** SME Mining Engineering Handbook 2<sup>nd</sup>
- 1997 Triple Bottom Line John Elkington
- 1999 Concept de DS en Mineria: BERLIN II UNEP
- 2003 Sustainable Development Framework- ICMM
- **2012** The Business of Sustainability

#### Fundamental Principles for the Mining Sector (Berlin II Guidelines- 1999)

Governments, mining companies and the minerals industries should as a minimum:

- 1. Recognize environmental management as a high priority, notably during the licensing process and through the development and implementation of environmental management systems. These should include early and comprehensive environmental impact assessments, pollution control and other preventive and mitigative measures, monitoring and auditing activities, and emergency response procedures.
- 2. Recognise the importance of socio-economic impact assessments and social planning in mining operations. Social-economic impacts should be taken into account at the earliest stages of project development. Gender issues should also be considered at a policy and project level. (New principle)
- 3. Establish environmental accountability in industry and government at the highest management and policy-making levels.
- 4. Encourage employees at all levels to recognise their responsibility for environmental management and ensure that adequate resources, staff and requisite training are available to implement environmental plans.
- 5. Ensure the participation of and dialogue with the affected community and other directly interested parties on the environmental and social aspects of all phases of mining activities and include the full participation of women and other marginalised groups. (Revised)
- 6. Adopt best practices to minimise environmental degradation, notably in the absence of specific environmental regulations.
- 7. Adopt environmentally sound technologies in all phases of mining activities and increase the emphasis on the transfer of appropriate technologies which mitigate environmental impacts including those from small-scale mining operations.

- 8. Seek to provide additional funds and innovative financial arrangements to improve environmental performance of existing mining operations.
- 9. Adopt risk analysis and risk management in the development of regulation and in the design, operation, and decommissioning of mining activities, including the handling and disposal of hazardous mining and other wastes.
- 10. Reinforce the infrastructure, information systems service, training and skills in environmental management in relation to mining activities.
- 11. Avoid the use of such environmental regulations that act as unnecessary barriers to trade and investment.
- 12.Recognise the linkages between ecology, socio-cultural conditions and human health and safety, the local community and the natural environment. (Revised)
- 13.Evaluate and adopt, wherever appropriate, economic and administrative instruments such as tax incentive policies to encourage the reduction of pollutant emissions and the introduction of innovative technology.
- 14.Explore the feasibility of reciprocal agreements to reduce transboundary pollution.
- 15.Encourage long term mining investment by having clear environmental standards with stable and predictable environmental criteria and procedures.

## BERLIN II GUIDELINS FOR MINING — UNEP 1999

### **DEFINE D.S. Y RSE EN MINERIA**

"Un proyecto minero desarrollado, operado y cerrado de modo social y ambientalmente aceptable es una contribución al desarrollo sustentable"

- Responsabilidad compartida de empresa y gobierno
- Gestión ambiental
- Impacto socio-economico
- Dialogo con comunidades afectadas
- Uso de Mejores Practicas si no hay exigencia legal
- Transparencia y predictibilidad en la empresa
- Seguridad y salud
- Incentivos fiscales como driver de sustentabilidad

## LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA

- 1970 RSE es maximizar la utilidad- Milton Friedman
- 1987 Desarrollo Sustentable: Brundtland
- **1992** SME Mining Engineering Handbook 2<sup>nd</sup>
- 1997 Triple Bottom Line John Elkington
- 1999 Concept de DS en Mineria: BERLIN II UNEP
- 2003 Sustainable Development Framework- ICMM
- **2012** The Business of Sustainability

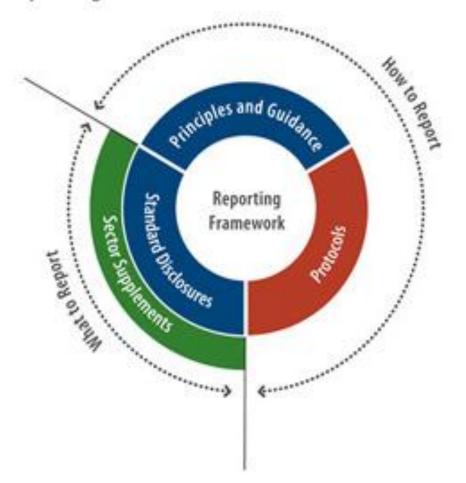
#### UN MARCO GENERAL PARA EL DESARROLLO SUSTENTABLE

(Los 10 principios del ICMM)

- 1. Practicas de negocio éticas y sistemas de gobierno corporativo sólidos.
- 2. Integrar valores de desarrollo sustentable en las decisiones día-a-día
- 3. Respetar los derechos humanos y las culturas, costumbres y valores en la relación con los empleados y otras partes afectadas por nuestra actividad.
- 4. Implementar estrategias de **gestión de riesgos** con bases científicas sólidas.
- 5. Gestionar la mejora continua en los resultados de seguridad y salud
- 6. Gestionar la mejora continua en los parámetros medio ambientales
- 7. Contribuir a la conservación de la biodiversidad y **planteamientos integrados en planificación de usos del territorio**
- 8. Facilitar y promover el **diseño responsable de producto, reutilización, reciclado** y eliminación de nuestros productos.
- 9. Contribuir al **desarrollo de las comunidades** en las que operamos.
- 10. Implementar un compromiso eficaz y transparente con nuestros participes para la comunicación y información publica con verificación independiente.

## The Global Reporting Initiative (GRI)

G3 Reporting Framework



**Marco internacional** de información publica que establece principios e indicadores para evaluar la eficiencia de las políticas de sustentabilidad de las empresas

## EL ESTANDAR ICMM DE ASEGURAMIENTO INDEPENDIENTE

- 1. INFORME PUBLICO SOBRE CUMPLIMIENTO DEL MARCO DE DESARROLLO SUSTENTABLE Y COMPROMISOS INFORMATIVOS DE ICMM
- 2. CONFIRMACION POR ICMM DE CUMPLIMIENTO POR EL INFORME DEL NIVEL G3 DEL GRI.
- 3. AUDITORIA EXTERNA DEL INFORME SEGUN PROCEDIMIENTO ICMM Y ESTANDARES INTERNACIONALES DE AUDITORIA ACEPTABLE COMO:
  - International Standard on Assurance Engagements (ISAE 3000)
  - AccountAbility 1000 Assurance Standard (AA1000 AS)
  - ISO 19011 Guidelines for Quality and EM Systems Auditing







African Rainbow Minerals

Anglo American

AngloGold Ashanti







C' AREVA

☐ Barrick

BHP Billiton







☐ Codelco

☐ Goldcorp







C Gold Fields

☐ Hydro

☐ Inmet







X Nippon Mining & Metals

☐ Lonmin

Minerals and Metals Group







3 Mitsubishi Materials

☐ Newmont

☐ Rio Tinto







Sumitomo Metal Mining

☐ Teck

□ Vale



☐ Xstrata

#### **MIEMBROS ASOCIADOS**

Cámara Argentina de Empresarios Mineros Cámara Asomineros Andi - Colombia Cámara Minera de México (CAMIMEX) Cámara Minera de Venezuela (CAMIVEN) Chamber of Mines of South Africa Chamber of Mines of the Philippines Chamber of Mines of Zambia Cobalt Development Institute Consejo Minero de Chile A.G. **Furometaux Furomines** Federation of Indian Mineral Industries Ghana Chamber of Mines Instituto Brasileiro de Mineracao International Aluminium Institute International Copper Association (ICA) International Iron Metallics Association

International Lead Association International Manganese Institute International Molybdenum Association **International Wrought Copper Council** International 7inc Association **ITRI** Japan Mining Industry Association Minerals Council of Australia Mining Association of Canada Mining Industry Associations of Southern Africa (MIASA) National Mining Association (NMA) - USA Nickel Institute Prospectors and Developers Association of Canada Sociedad Nacional de Minería (SONAMI) - Chile Sociedad Nacional de Minería, Petróleo y Energía - Peru World Coal Association World Gold Council

## LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA

- 1970 RSE es maximizar la utilidad- Milton Friedman
- 1987 Desarrollo Sustentable: Brundtland
- **1992** SME Mining Engineering Handbook 2<sup>nd</sup>
- 1997 Triple Bottom Line John Elkington
- 1999 Concept de DS en Mineria: BERLIN II UNEP
- 2003 Sustainable Development Framework- ICMM
- **2012** The Business of Sustainability

#### THE BUSINESS CASE ON SUSTAINABILITY



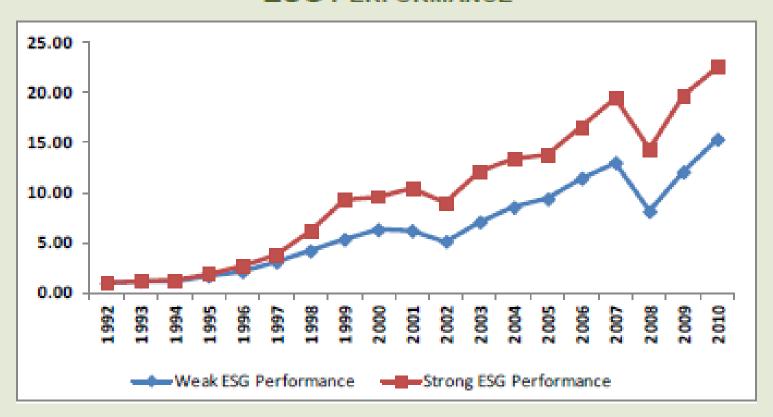
McKinsey&Company



#### THE BUSINESS CASE ON SUSTAINABILITY

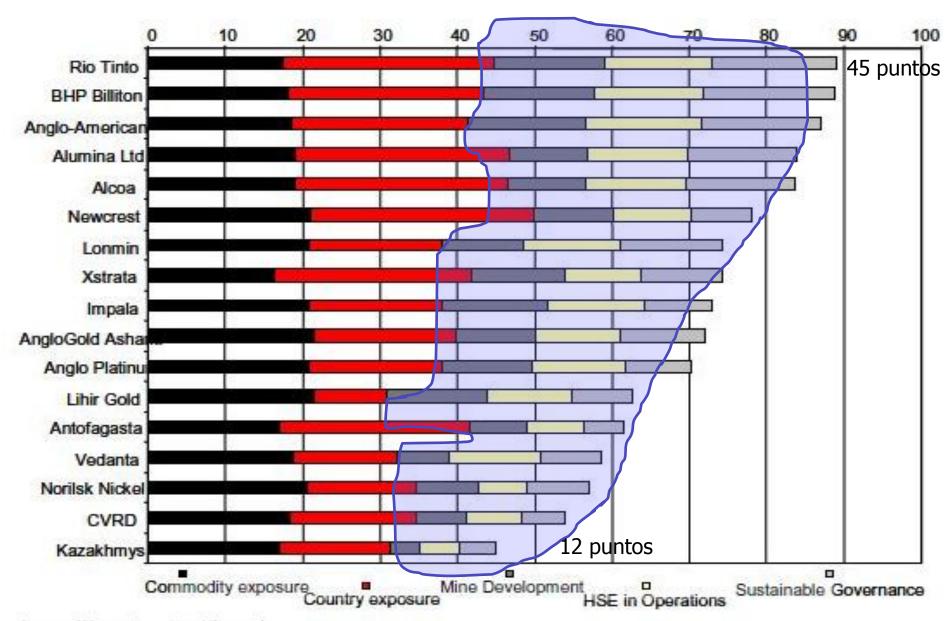
ESG PERFORMANCE vs. FINANCIAL PERFORMANCE

## FINANCIAL PERFORMANCE OF COMPANIES WITH WEAK VS. STRONG ESG PERFORMANCE



Source: Eccles G.R., Ioannou I. Serafeim G. "The Impact of a Corporate Culture of Sustainability on Corporate Behavior and Performance," Harvard Business School, November, 2011.

#### Riesgos de negocio: Citi 0-120 Sustainability Mining Index



#### LA PROFECIA DE CITI SOBRE RSE .. ¿EL FINAL?

Citigroup Research. 2006. Towards Sustainable Mining

**THE OLD WAY:** Seek out low-regulation, low environmental and social costs for their future development

Riding with the cowboys....

**THE NEW WORLD**: Develop a business model that places a premium on environmental responsibility and social progress.

Or hanging with the sheriff

If you operate **THE OLD WAY** in the **NEW WORLD**, you will go out of business

going to jail

## **EL ENFOQUE PRAGMATICO**

Como y hasta que punto los beneficios sociales y medioambientales generados por la gestión sustentable crean valor para la empresa

Que hacer por empresa, el Gobierno y Comunidad (y demás "stakeholders") para que el rendimiento socio-ambiental y el rendimiento económico estén directamente relacionados.

Puede RSE llegar a ser un valor agregado cuantificable, es decir, bajo que condiciones podría plantearse un "Caso de negocio de sustentabilidad" que sustituya al paradigma "triple Bottom Line?

## **OBJETIVOS**

- 1. Enfoque conceptual: Sustentabilidad y RSE
- 2. RSE: Un concepto controvertido
- 3. El negocio de sustentabilidad: ¿Nuevo paradigma?

## RESPONSABILIDAD SOCIAL EMPRESARIAL

# LA EMPRESA ASUMEN VOLUNTARIAMENTE OBJETIVOS DE GESTION AMBIENTAL Y SOCIAL MAS ALLÁ DE LOS LEGALMENTE EXIGIBLES.....

PORQUE? .. POR QUIEN? ...COMO?

## ¿QUE IMPLICA EL CONCEPTO DE DESARROLLO SUSTENTABLE EN MINERIA (UNEP) Y HASTA DONDE DEBE LLEGAR LA EMPRESA?

#### **EFICIENCIA**

- Facilitar la creación de riqueza (Por la empresa minera)
- Maximizar la utilidad social neta

#### **EQUIDAD**

Distribución equitativa de excedentes

#### SUSTENTABILIDAD EN SENTIDO ESTRICTO

Bienestar social perdurable tras el cierre de la mina



## EFICIENCIA – Maximizar la utilidad social neta

Considerar todos los beneficios y los costos sociales, los de la propiedad y los externos ¿O lograr la licencia Social?)



## LA LICENCIA SOCIAL COMO EQUILIBRIO ENTRE BENEFICIOS Y COSTOS SOCIALES





BAJO PERFIL DE RIESGO
MAYOR EFICIENCIA OPERATIVA
MEJOR PLANIFICACION Y CONTROL
VENTAJA ACCESO A RECURSOS
MINERALES
VENTAJA ACCESO RRHH
VENTAJA ACCESO FINANCIACION
VENTAJA EN GESTION PERMISOS



MAS EMPLEO DIRECTO E INDIRECTO MAS CAPACIDAD FINANCIERA PROYECTOS COMUNITARIOS



CAMBIOS PERMANENTES USO TERRENO SALUD Y SEGURIDAD EN LA ZONA IMPACTOS PERMANENTES A AGUAS INMIGRACIONES MASIVA REASENTAMIENTOS DE COMUNIDADES EXCESIVA DEPENDENCIA ECONOMICA DESAPARICION ACTIVIDAD TRADIC.





# EQUIDAD .... a quien y en que proporción?

Los dueños de la empresa - DIVIDENDO
Los trabajadores — SALARIO Y BENEFICIOS
Las comunidades locales — INVERSIÓNES SUSTENTABLES
Los gobiernos locales y regionales — TASAS E IMPUESTOS
El gobiernos de la Nación - FISCALIDAD
Otros stakeholders — APOYO A ACTIVIDADES ARTESANALES



#### **SUSTENTABILIDAD**

#### Mantener el bienestar social tras el cierre de la mina

SOLUCIÓN: Invertir parte del excedente en actividades sustentables hace que la riqueza generada por la mineria sea sustentable

#### **PROBLEMAS:**

- Cuanto hay que invertir?
- Por quien?
- En que?
- Donde?



## RSE y economía de mercado

## EN UN ENTORNO IDEAL DE LA ECONOMIA DE MERCADO EL CONCEPTO DE "IR MAS ALLA DEL CUMPLIMIENTO ESTRICTO DE LA LEY NO TIENDRIA SENTIDO"

- El Estado establece un marco legal y regulatorio que asegure los tres objetivos (Eficiencia – Equidad – Sustentabilidad)
- Las compañías mineras maximizan su beneficio cumpliendo el marco legal establecido por el Gobierno



### El concepto RSE es controvertido

# EN UN ENTORNO REALISTA (NO IDEAL) DE LA ECONOMIA DE MERCADO, "IR MAS ALLA DE CUMPLIR LA LEY" TIENE SENTIDO

La actitud positiva de trabajadores y comunidad genera beneficios internalizables (Hay consenso)

Actuar como institución subrogante del Gobierno o agencia de desarrollo local cuando el Gobierno y las instituciones sociales son débiles o inexistentes (Controvertido)

Cumplir una obligación moral incluso a costa de menores beneficio (Muy controvertido)



# **OBJETIVOS**

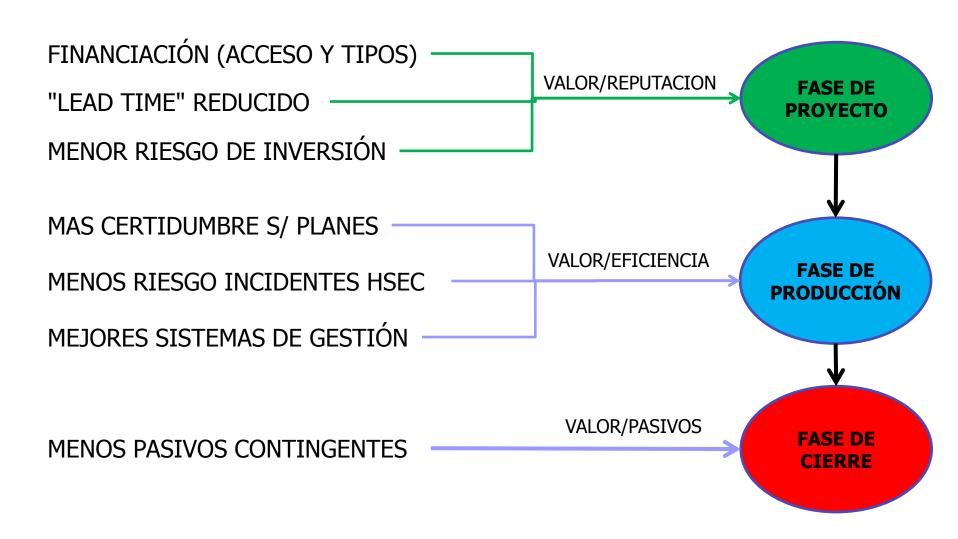
- 1. Enfoque conceptual : Sustentabilidad y RSE
- 2. RSE: Un concepto controvertido
- 3. El negocio de sustentabilidad: ¿Nuevo paradigma?

# HAY EVIDENCIAS DE LA RELACIÓN DIRECTA ENTRE GESTIÓN SUSTENTABLE Y CREACIÓN DE VALOR

Pero es difícil de cuantificar, ya que?

# LOS BENEFICIOS POTENCIALES PARA LA EMPRESA SON DIFICILES DE CUANTIFICAR

LOS COSTOS DEPENDEN DE LA PERCEPCION Y LAS EXPECTATIVAS SOCIALES





#### INGENIERIA Y GESTIÓN SUST. DEL PROYECTO

- Ingeniería de procesos mineros y metalúrgicos
- Manejo de materiales minados (relaves, estéril, ..)
- Infraestructuras y sistemas HSEC
- Participación de stakeholders en toma de decisión

#### **FINANCIACIÓN (ACCESO Y TIPOS): REPUTACION ANTE INVERSORES**

- Un tipo 1% mas bajo puede rebajar un 4% en VAN(Cap.+Interés)
- Mejores condiciones de crédito pueden suponer otro 2% VAN(Cap.+interés)

#### "LEAD TIME" REDUCIDO: REPUTACION ANTE COMUNIDAD Y GOBIERNO

Un año de "lead time" equivale a aprox. 3% de aumento en TIR

#### **MENOR RIESGO DE INVERSIÓN:**

Los beneficios se realizan vía costos y reputación en la fase de producción



#### **INGENIERIA Y GESTIÓN SUST. DEL PROYECTO**

- Estructura organizativa de sustentabilidad
- Sistemas de gestión (ISO, OSHAS, etc..)
- Sist. de gestión de mejora continua (six-sigma..)
- Transparencia (GRI, Auditoria externa..)
- Acciones RSE

#### **CERTIDUMBRE EN LA PLANIFICACIÓN Y CONTROL:**

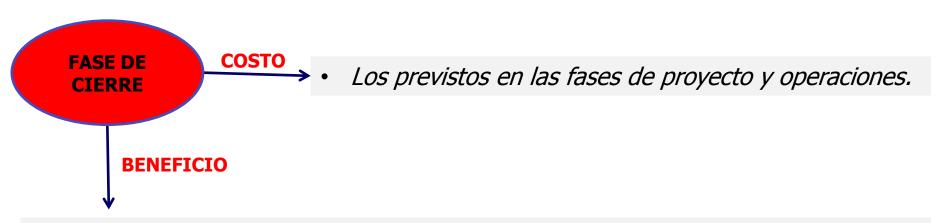
- Mejoras en el rendimiento de las operaciones
- Menor costo de insumos críticos (Agua, energía, reactivos, etc.)

#### **BAJO RIESGO INCIDENTES HSEC:**

- Menos eventos con perdida de producción (relaves, polvo, ruido, riles..)
- Reducción en numero y gravedad de accidentes laborales

#### **MEJORES RELACION CON STAKEHOLDERS:** LICENCIA SOCIAL

- Menor rotación de personal y conflictividad laboral
- Menor costo aprovisionamientos, seguros, ...
- Credibilidad de la Empresa en la comunidad



- Menor costo de implementación de medidas mínimas de cierre (polvo, DAM, ..)
- Reducción en pasivos ambientales imprevistos y no controlables (\*)
  - (\*) Deterioro de taludes de rajo
    - Deterioro de botaderos
    - Riesgo de eventos catastróficos en tranques de relaves
    - Filtraciones contaminantes a napa subterránea
    - Generación de polvo , lluvia acida, contaminación de suelos

## **CONCLUSION 1**

LOS PRINCIPALES FACTORES (drivers) DE BENEFICIO PARA EL CASO DE NEGOCIO DE SUSTENTABILIDAD SON:

MITIGACION DEL RIESGO
ACCESO A FINANCIACION
ACCESO A CAPITAL HUMANO
EFICIENCIA OPERACIONAL
MENORES PASIVOS CONTINGENTES

## **CONCLUSION 2:**

HAY MUCHAS EVIDENCIAS DE LA RELACION ENTRE SUSTENTABILIDAD Y BENEFICIO ECONOMICO PERO SU CUANTIFICACION NO ES FACIL, YA QUE:

INVERSION Y BENEFICIO RESULTANTE OCURREN EN ETAPAS MUY ALEJADAS EN EL TIEMPO E INCLUSO EN OTROS PROYECTOS DE LA EMPRESA

EL IMPACTO ECONOMICO VARIA EN FUNCION DEL TAMAÑO DE LA EMPRESA Y LA UBICACIÓN DEL PROYECTO

## **CONCLUSION 3:**

# HAY DRIVERS TENDENTES A CONSOLIDAR EL CASO DE NEGOCIO EN EL FUTURO:

LA ADHESION A MARCOS VOLUNTARIOS DE RSE SERÁ IMPRESCINDIBLE PARA ACCEDER A FINANCIACIÓN

PROFESIONALIZACIÓN DE LA RELACION EMPRESA-COMUNIDAD. EXPERTOS DE AMBAS HABRAN DE CONSENSUAR EL PROYECTO

TENDENCIA A LA INTEGRACION "DE FACTO" DE LICENCIA GUBERNAMENTAL Y LICENCIA SOCIAL

### **EL DESAFIO DEL SIGLO XXI**

HOY POR HOY, EL CASO DE NEGOCIO DE SUSTENTABILIDAD ES YA BASE ESTRATÉGICA DE LAS GRANDES CORPORACIONES MINERAS

LA PEQUEÑA Y MEDIANA MINERIA QUEDAN POR AHORA FUERA DEL "NEGOCIO DE LA SUSTENTABILIDAD". ¿COMO INCORPORAR A ESTE SECTOR?.

GOBIERNO, COMUNIDAD y EMPRESAS DEBEN CREAR LAS CONDICIONES DE ENTORNO NECESARIAS PARA QUE LA EMPRESA MINERA (INCLUYENDO PYMES) PUEDAN OPERAR CON EFICIENCIA Y LICENCIA SOCIAL

# LOS CONCEPTOS DE D.S., SUSTENTABILIDAD Y RSE EN MINERIA





**GRACIAS** 

jabotin@iies.es

# LAMINAS VINCULADAS A LA PRESENTACION