Standardization for Sustainable Mining

Fernando UTRILLA
Head of Research and Innovation Unit

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• Private, non-profit independent Association.
• About 500 Members.
• Created in 1986 (called AENOR until 2016).
• Designated by law as the Spanish National Standardization Body.
• Member of CEN, CENELEC, ETSI, ISO, IEC, COPANT.

Standardization for Sustainable Mining
• Standardization

• Standardization, research and innovation

• Standards for sustainable mining

• Conclusions
Create **standards** through the joint contribution of knowledge with a common interest.

**STANDARD:**

- Technical document, available to public.
- Voluntary application.
- Made by consensus.
- Published by a Standardization Organization.

DO NOT CONFUSE STANDARDIZATION WITH:

- Regulation.
- Certification.
Benefits of Standardization

MACRO-ECONOMIC:

- 1% of GDP (in Spain: about 10,000 M€/year).
- 13% of working productivity growth.
- 92% of world trade.

BUSINESS:

- Eliminates market barriers.
- Shifts competitiveness.
- Rationalizes products & services, reduces stocks.
- Improves design and purchasing management, reduces costs.
- Sets comparable quality and safety requirements.
- Generates user confidence.
- Improves compatibility.
Process of Standardization

- **Pre-Normative Research**
  - Rationalization
  - Harmonization
  - "Standard elements"

- **Research Project Consortium**

- **Self Made**

- **Decision**

- **Writing**

- **Public Consultation(s)**

- **Approval**

- **Publication**

- **Consensus Made**

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• **Standardization, research and innovation**

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To increase the IMPACT of projects on the market, society, etc.

Horizon 2020: General documents, work programmes and specific calls include standardization as a requested or recommended activity in projects.

“Standardization provides interoperability and quality of products, generates users confidence and helps opening markets.”

1 – Consider **existing standards** in the project preparation and running.

2 – Contribute with project results to the development of **new standards**.
Benefits

FOR PROJECTS (RESEARCHERS):

Know/use present standards:
• Compatibility
• Simplicity, saving efforts and costs
• State of the art

Include results in new standards:
• Dissemination
• Knowledge transfer
• Market uptake
• Internationalization

FOR PUBLIC AUTHORITIES (FUNDERS):

• Increased market impact: economical growth.
• Using a powerful system already established.

Standardization for Sustainable Mining
Practical Guidelines

- **Always consider** if standardization can be useful:
  - *Is it required/recommended?*
  - *Will an improvement of the impact help succeeding the funding evaluation?*
  - *Will results be close to the market stage?*

- Include **specific activities** (tasks, deliverables, resources, deadlines).

- Transmit the **concept** (effect on impact) in the proposal.

- Consider if you can **do it by yourself** or if you need some support (National Standardization Bodies).
Examples of projects
• Standardization
• Standardization, research and innovation
• **Standards for sustainable mining**
• Conclusions
Spanish Standards on Sustainable Mining

UNE 22470:2015 - **Sustainable Mining Management Indicators**
UNE 22480:2015 - **Sustainable Mining Management System**

- Developed by Spanish Technical Committee CTN 22.
- Currently under revision to include new ISO management systems structure.
Benefits

• Integration of continuous improvement concepts in the sustainability of mining operations

• Complementary to:
  
  • ISO 9001 (Quality)
  • ISO 14001 (Environmental)
  • OHSAS 18001 / ISO 45001 (Health and Safety)

• Well suited for SMEs

6 mining companies currently certified
CRITERIA:

1) Safety of supply to meet the demand (short, medium & long term)
2) Efficient use of natural resources
3) Measures to promote and improve workers’ H&S
4) Contribution to community economic development
5) Contribution to community social development
6) Rehabilitation of the natural space
7) Best available techniques in:
   - Pollution prevention and control
   - Waste management
P-D-C-A: CONTINUOUS IMPROVEMENT CYCLE

**ACT**
- Corrective actions
- Preventive actions
- Management review

**PLAN**
- Policy
- Indicators
- Aims and programs

**CHECK**
- Follow-up
- Records control
- Internal auditing

**DO**
- Responsibilities
- Communication
- Documents
- Operations control

Standardization for Sustainable Mining
2014 Commitment:

“Proposal for a European Standard for the certification of Sustainable Mining Management Systems”

But... never started!
Standards help with some mining problems in Europe

**COMPLEXITY OF PERMITTING PROCESS:**
- Multiple and disperse administrative processes
- Very long periods for getting approvals

**DIFFICULTY ON ACCEDING RESERVES:**
- Conflicts with environmental protected zones
- Mining not considered in land planning policies

**LOW SOCIAL ACCEPTANCE:**
- Considered as a dangerous and disturbing activity
- Environmental problems
- Low visibility of benefits to society (local and general)
International voluntary certification schemes

**EXAMPLES:**
GRI - Global Reporting Initiative: Supplement on Mining and Metals
BETTERCOAL: Coal
AMR - Alliance for Responsible Mining: Gold
RJC - Responsible Jewelry Council: Diamonds, Gold and Platinum
KPCS - Kimberley Process Certification Scheme: Diamonds

- Most of them focused to problems of **specific sectors**
- Supported by **large** mining companies and traders
- **Difficult** to implement in small and medium companies
- High certification **costs**
The reasons for Stand4Mines

OBJECTIVES:

Enable a third-party certification of the sustainable management of mining operations at European level:

• Improving the social image of mining

• Growing-up confidence on stakeholders

• Potentially facilitating access to reserves

• Simple, cost effective and suitable for SMEs
• Standardization
• Standardization, research and innovation
• Standards for sustainable mining
• Conclusions
1. Trust in Standards

- Thousands of standards referenced in legislation (>8600 in Spain and >4600 in Europe)
- Open and transparent process
- Balance of stakeholder’s powers
- Consensus
- Clearly regulated, with neutral “referees” (standardization bodies)
2. Stand4Mines

- Still possible to generate European Standards and certifications for S.M.
- Open to new parties interested in leading and supporting
- UNE can support standardization procedures
SOURCES OF INFORMATION

UNE:

- [www.une.org](http://www.une.org)

CEN and CENELEC:

- [www.cencenelec.eu](http://www.cencenelec.eu)

STANDARDIZATION FOR RESEARCH AND INOVATION:

- Standardization in H2020 projects

STANDARDS FOR SUSTAINABLE MINING:

- [UNE 22470:2015](http://www.une.org)
- [UNE 22480:2015](http://www.une.org)
Thanks for your attention!

Fernando Utrilla
Head of Research and Innovation Unit
futrilla@une.org