

## Urban mining for a circular economy – Focus on metals and developing countries perspective

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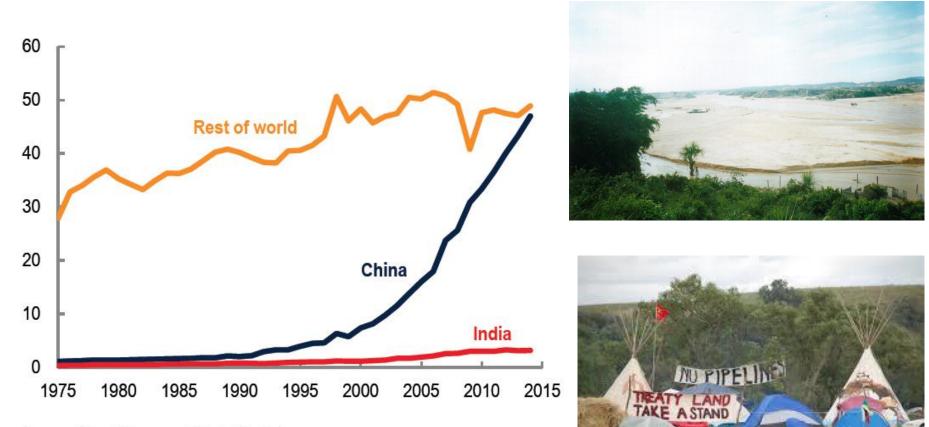
Materials Science & Technology





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### **Full Metal Consumption (millions of tonnes)**



Source: World Bureau of Metal Statistics.

*Note*: Last observation is 2014. The six metals are included: aluminum, copper, lead, nickel, tin and zinc.



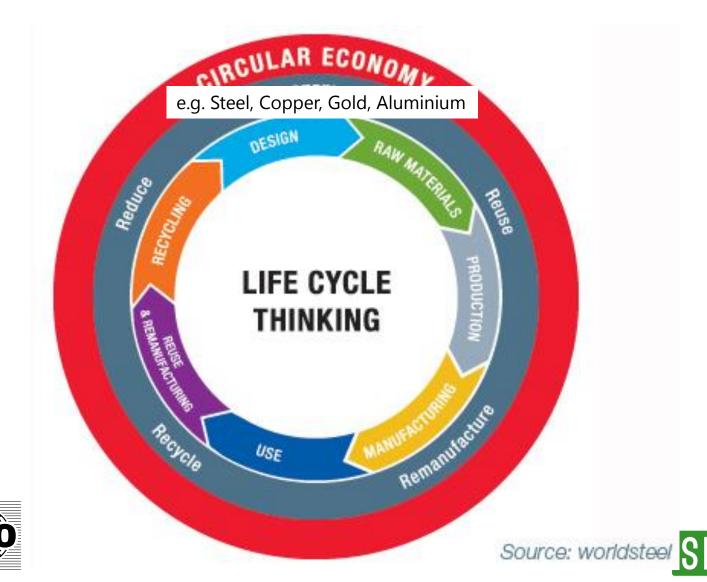


The availability of many metals in future will be ensured through changes in lifestyles and technological innovations that incorporates secondary materials (urban mining).





#### To make the circular economy work, we need to keep the scrap in the loop: urban mining







**Recycling offers opportunities but also poses risks.** Urban mining in developing countries is more efficient. However, more than 90% of recovered metals is done informally.

#### Informality



~ 25 000 people recycle plastic in New Delhi, India



Environmental pollution, health hazards, other

#### **Opportunities**



#### **Circular Economy (CE) is approached differently in developing countries**



Focus on resources management. People driven.



CE in developing countries should evolve towards more responsible urban mining and be embedded in national policies.



### Supporting Urban Mining in small and informal recycling activities: ISO International Workshop Agreement 19, Dec 2016

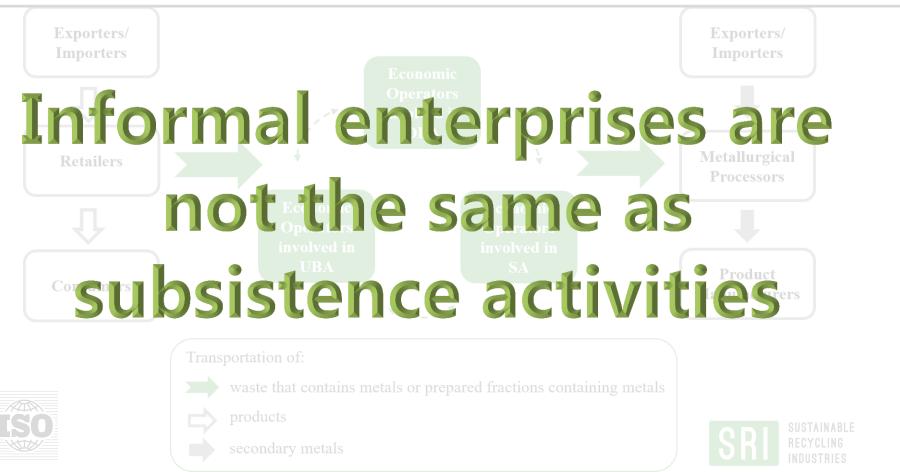
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SUSTAINABLE RECYCLING INDUSTRIES



### **Economic Operators in the scope**

Any individual, enterprise, association, cooperative or organisation involved in **Subsistence Activities** (SA), **Unofficial Business Activities** (UBA) or **Official Business Activities** (OBA)



#### **Sustainability Requirements: Five Guidance Principles**



5. Implementing a sustainable management approach





#### **Sustainability Requirements: Five Guidance Principles**

#### **Formalisation challenges**







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Mejoramos las condiciones de vida de la población, mediante el desarrollo de una minería de oro responsable.

# Thank you!

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