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The concept of Environmentally Sound Management (ESM) for metal recyclables has been on the policy agenda of international fora concerned with the transboundary movements of wastes for about a decade. A lot has been said and written about it (Re: paper by Alter.) Yet, a consensus does not appear to exist on how the concept may be developed and articulated into a tool that can be used as a reference for the transboundary movements of wastes, especially valuable and needed metal recyclables. ESM is a key part of the Basel Convention.

Article 4.8 of the Basel Convention requires that Parties ensure “that hazardous wastes or other wastes to be exported, are managed in an environmentally sound manner in the State of import.” The same article states that “Technical guidelines for the environmentally sound management of wastes subject to this Convention shall be decided by the Parties at their first meeting”.

The fact that an acceptable set of guidelines on ESM does not yet exist is a matter of concern for industry. The lack of an ESM reference leaves open the question about meeting the obligations set out in the Convention. This OECD workshop and the documents being prepared for Basel’s COP V indicate a renewed sense of priority and a determination to advance the work and are indeed welcome developments.

The regulatory framework for trade in recyclables, particularly metal recyclables, has become increasingly complex and cumbersome over the last decade. Some countries have difficulty interpreting or implementing international definitions, which may conflict with national definitions, of what is a waste or a resource. National and international bodies have struggled to define what is a waste and what is a non-waste.

The discrepancies in definitions have led to divergences in national regulatory approaches and frameworks from country to country. Because of these differences, the transboundary movement of recyclables is subject to inconsistent - if not incompatible - regulations and requirements. The existence of trade blocs (i.e. the EU) may add an additional level of definitions and regulations. Finally, in spite of good intentions, the Basel Convention and its implementation under the OECD Council Act have complicated the transboundary movements of recyclables. The administration of the existing regulatory frameworks has become a growing challenge not only to industry but also to governments. It is complex and costly.

An international agreement on an acceptable ESM framework will require a lot of time and debate. In the end, however, industry will have to operate within the confines of the framework that will emerge. It is imperative that the framework provide for an efficient and cost-effective mechanism that industry can readily use to meet its international obligations. A key requirement of an efficient and cost-effective mechanism is the existence of a single ESM framework that would apply to all international agreements, particularly the Basel Convention and the OECD agreement.

The objective of this paper is to provide a constructive contribution to the ESM debate by reviewing a number of aspects that underlie many of the issues and to identify strategies that may be used to advance the development of a suitable ESM framework.

Metals recycling: an industry that also provides an environmental service

Metals recycling is an activity that has existed for centuries, probably since the Bronze Age. It exists because secondary metals can profitably compete with primary metals in supplying materials to society and thus helps make valuable, useful products from obsolete products or manufacturing scraps.

The level and types of controls the international community is directing at the metals recycling industry is a concern to industry. While no one will deny that metal recycling, like all industrial activity, can affect the environment, it is by definition an industry that also provides an environmental service. (The OECD Council Act C(92)39/FINAL preamble provides some acknowledgment of this; the Basel Convention does not.)

The challenge to policymakers should be to maintain - if not enhance - the market forces that foster the recycling of metals. At the same time, there is a need to ensure that the industry operates in an environmentally sound way.

Operating in a competitive environment

Because the recycling industry operates in a competitive environment, the regulators need to be mindful about the impact of their regulations and controls on the competitiveness of the industry. The reality is simple: higher costs mean less recycling, i.e. loss of natural resources and greater environmental loadings.

Recycled metals compete directly against virgin metals for the manufacturing of products. Over the last century, the prices of primary metals have fallen in real terms. The same is true of materials that compete against metals. For recycled metals to remain competitive, the costs of recycling must also fall in real terms. Better technologies and management have maintained the competitiveness of the recycled metals.

Primary nonferrous metal smelters are now among the largest nonferrous recyclers as they are using increasing amounts of secondary metals in their feed. Because they can feed concentrate and secondary metals, their feed sourcing decision is cost sensitive. These primary smelters generally provide for comparatively high levels of environmental and health protection.

Using different technologies

There is no unique technology that is best at treating all types of ores and metals, both economically and environmentally. Primary smelters use a variety of technologies best suited to treat the specificity of different ore types. As a result, smelters produce different types of residues that are commonly moved from one smelter to another in search of the best technology capable of extracting a metal from that residue. Their specific process also allows them to efficiently recycle a wide range of secondary metals beyond smelter residues. Some of the primary smelters are in developing countries.

The same variety of technologies exists among secondary smelters. The processes used are optimized for specific types of wastes, but also for specific labour and capital comparative costs as well as specific environmental, management and social conditions.

Characteristics of the metals recycling industry

Discussions on an ESM framework for metal recyclables often appear to suggest that a different regulatory framework needs to be created to meet the specificity of this possibly unique industry. In all countries, a regulatory framework that applies to any industrial activity is already in place. Typically, such frameworks include a broad array of environmental regulations, such as for air emissions, water effluents, residue management, materials storage and handling and worker health and safety. Is metal recycling so different an industrial activity that it requires a specific regulatory regime?

A metal recycling plant

- produces or “manufactures” a saleable material or product for which there is a demand;
- operates in a competitive environment;
- has a product that is made from inputs that are sought and purchased to specification to feed the production process;
- produces wastes that may have to be disposed or sold, some of which may be hazardous;

- has wastes similar to the wastes of comparable plants and industries including those using primary raw materials;
- is subject to the same regulations as any other industry about the disposal of these wastes;
- is often located in or around settlement areas with other manufacturing plants that may use hazardous inputs
- is subject to the industrial laws of the country where it operates. (It must protect the health and safety of its workers, it must control and report on its emissions);
- is an industrial facility that includes major pieces of equipment, representing an investment of some millions of dollars. It is known to and regulated by the competent authorities.

In summary, metal recycling is not unlike other industrial activities. The dynamics of recycling and the nature of its likely environmental and health impact are similar to those of other industrial activities that are generally deemed to be adequately regulated under existing industrial regulatory frameworks. When the plants are so controlled, the question is begged whether additional regulation, under some precept that the input materials have been defined as wastes, is needed or useful.

It needs to be noted that while the inputs of recycling may be defined as wastes, the dynamics of the management of these “wastes” has little if anything to do with those of wastes for disposal. They are instead similar to those of the manufacturing sector.

The evaluation of ESM compliance may therefore not require the development of guidelines that would unnecessarily duplicate or supersede existing industrial regulatory frameworks. It may simply require confirmation whether an industrial recycling facility is known to, regulated and authorized by the competent authority.

ESM in non-OECD countries?

The regulatory frameworks of most countries, OECD but also non-OECD, particularly the industrializing ones, provide for generally high levels of environment and health protection, if they are enforced. The issue of enforcement has attracted a lot of attention, particularly in relation to non-OECD countries.

By allowing for trade in hazardous recyclables between OECD countries, the Basel Convention has implicitly assumed that facilities in OECD countries are ESM compliant by definition and that ESM is adequately enforced.

A similar assumption apparently cannot be made in the case of developing or other non-OECD countries. It is argued that there are non-OECD countries that have a recycling industry where the competent authority lacks the capability to evaluate and monitor the environmental performance of the industry and thus identify whether the industry is ESM compliant or not. Consequently, it is argued that there is a need for an ESM framework that provide a basis which exporters from other countries may use to evaluate the ESM compliance of importers in non-OECD countries.

This view complicates the international consensus on ESM for a number of reasons.

- An international reference for non-national (exporters) to evaluate other countries and their plants’ ESM capability may raise the issue of national sovereignty. Is a foreigner better suited to evaluate the ESM compliance of a facility than the competent authority?
- It assumes the development of a single ESM reference that would apply universally. For several reasons including simplicity and effectiveness, it is highly desirable to have a single ESM framework that applies globally and industry would support that. The issues then become what would be the basis for such a widely applicable framework, what role if any should it recognize for national governments and whether it could or should allow to reflect local conditions. The latter may be a concern in light of Article 11 of the Rio Declaration which states that “Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries”.

- It raises the issue about the objective of an ESM framework: is it to confirm the existence of a level of performance that can be considered ESM? Is it to promote continuous improvements towards the more global implementation of ESM? Or is it about seeking to reconcile these two objectives? These objectives are not mutually exclusive; however, the application of a given ESM framework can promote one objective and not the other. Recent studies done in the Philippines by UNCTAD and in India indicate for example that trade restrictions on metal recyclables that were put in place to restrict trade to the more ESM compliant OECD countries may create environmentally negative consequences, particularly in a developing country context.

These issues, however, need not be intractable if assumptions and observations are re-examined.

- There are non-OECD countries that have a significant industrial metal recycling activity. There are non-OECD countries where the competent authority does not have the capability to evaluate the ESM of recyclables. However, these two observed realities do not generally co-exist.
- The operation and management of a recycling facility require expertise and know-how within the plant itself as well as outside in order to provide the plant with the services and equipment it requires. In other words, the existence of a recycling industry indicates the existence of a minimum of capacity in the country; this capacity is equally available to the competent authority. There is generally a correlation between the level of sophistication of the country's industrial base and of its government or civil service. The national authority therefore is not without capacity to evaluate the environmental performance of regulated industrial plants under its jurisdiction.
- Facilities that can be considered an industrial metal recycling plant can be found in only a handful of non-OECD countries, primarily the rapidly industrializing ones with material intensive patterns of growth. Conversely, the great majority of developing countries, particularly the less developed ones, only have artisanal or informal, but no industrial recycling. Only industrial plants should have the ability to import recyclables. An industrial recycling facility may be defined as one that is known, regulated and authorized by the competent authority.
- There is another safeguard to ensure that lack of capacity in a non-OECD country may not create a threat to ESM. Countries that lack technical expertise and enforcement capability can use simple good judgement to declare a prohibition on the import of hazardous recyclables and have their decision become law under existing international agreements. The international metal recycling industry would fully commit to respecting such a decision by any country.

In summary, there exists in non-OECD countries that have an industrial recycling facility the ability either to contribute to the evaluation of ESM compliance in these facilities or use existing international legal instruments to close their borders to imports. An internationally acceptable ESM framework should not have to provide for situations where there is a total absence of capability to evaluate ESM. This may help avoid the need for an unnecessarily complex ESM framework.

Sham, illegal and informal recycling

Sham, illegal and informal recycling are issues that have been raised as considerations that warrant the existence of very strict controls at all levels to ensure the ESM of trade in recyclables.

“Sham recycling” is the final disposal of wastes masquerading as recycling. “Illegal recycling” is an activity that is in contravention of regulations and taking place outside the knowledge or control of the competent authority. “Informal” recycling is an activity taking place outside the knowledge and control of the competent authority. This situation is not uncommon in developing countries, including some which are quite technologically advanced.

Great care should be exercised in identifying facilities authorized to trade in hazardous recyclables guided by an internationally agreed ESM framework that leaves enough flexibility to reflect the specific conditions of some countries. It should be born in mind that standards applied by some countries might be inappropriate for other countries because of social and economic costs, especially in developing countries. Since it is important that

non-OECD countries get access to the recycling market, any international framework should encourage countries to start. If non-OECD countries do not get access, illegal and sham recycling will be encouraged.

States usually know their bona fide recycling facilities, those that operate with the knowledge and control of the competent authority and those they may qualify as ESM-compliant. In most non-OECD countries, the number of these facilities is relatively limited. One possibility that might be further explored could be the requirement, for example, that countries post lists of ESM-compliant facilities which would be authorized to trade in hazardous metal recyclables. By definition, illegal and informal facilities would be excluded from the list as their ESM compliance could not be assessed by the competent authority.

The import of recyclables: some implications

The ability to import recyclables has implications that are quite different for facilities in OECD or non-OECD countries. OECD economies are generally older and have a broader industrial and consumer base; their pattern of growth is steadily less material intensive. As a result, they generate a large amount of metal for recycling. Non-OECD economies are younger and not as broad. As a result, the supply of recyclables is limited and the demand for metals is great. The market forces in these countries are different because of the existence of an informal sector that creates tough competition for the formal sector. For the latter, imports are crucial.

Without the import of recyclables, the rapidly industrializing non-OECD countries face a large gap between domestic supply and demand for metal recyclables. Restrictions on imports will cause the price of metal for recycling to rise and the formal sector may find itself unable to compete against the much lower-cost informal sector in securing its share of the domestic supply of recyclables. In other words, without imports, formal recyclers may go out of business. This has been documented in some developing countries. This drives more and more of the recycling activity towards the informal sector with all of the environmental consequences of such a shift.

This raises an issue that deserves greater consideration than it has received to date in fora where international agreements on trade in recyclables are discussed. These fora have focussed their work on the development of controls to prevent abuses and ensure the ESM of recyclables. Discussions have, however, been limited to the market implications or distortions that proposed controls or frameworks may create.

As indicated above, trade restrictions can create price distortions between international and domestic prices of recyclables. These distortions create an economic incentive for illegal trade. No amount of controls or regulations on legitimate recyclers can control illegal activities since they take place outside legal frameworks. When there are price distortions, the more unwise restrictions on legitimate recyclers exist, the more scope there is for illegal or criminal activity.

The challenge to regulators should be to devise a framework that prevents distortions and promotes ESM at the same time. The example of listings described in this paper is but one illustration of a strategy designed to achieve both. It allows some trade to prevent distortions and creates positive incentives (access to trade) for the better performers.

Conclusion

Reaching international agreement on a framework is always a complex undertaking. This paper simply sought to identify simple strategies to deal with otherwise complex situations. Knowing that a simple mechanism can provide a real life solution may help manage the conceptual complexities of future work on ESM.

This paper also sought to provide a better understanding of the dynamics of the industry and the corresponding challenges it may pose to ESM. This is important as it sheds light on the market forces that may or may not be consistent with the promotion of environment and health protection as well as the appropriate stewardship of metal recyclables. ESM should primarily target the challenges that need to be addressed, not necessarily the whole "life-cycle" of the industry.

The environmental challenge posed by the industry is not the dumping of wastes which responsible firms do not do. It is not in the economic and business interest of the recycling industry to dump its raw materials.

The economic value of metal recyclables provides an incentive for the safeguarding of recyclables. This is an ideal context for governments and industry to discuss a role that could be played by voluntary industry initiatives in order to promote the exercise of appropriate stewardship in support of an efficient approach to ESM.

There is benefit to having continuous improvements in the environmental performance of the metal recycling industry through better technology and management. In order to enhance the environmental performance of the metals recycling industry, investments will be required. The funds will need to come from the private sector. The metals recycling industry of the OECD countries will have no interest in investing funds or technology in non OECD countries or companies with which it has no business. It may be more inclined to do so to maintain profitable business relationships that may only continue unless improvements are implemented. The decisions of regulators, including the design of the ESM framework, can create incentives or disincentives to the flow of investment and technology.

The recommendation to give more attention to the market implications of regulatory or ESM decisions does not imply that business, the economy or profits are given priority over environmental and health concerns. Quite the contrary. It is rather about harnessing market forces in a manner that not only will not undermine the objectives of regulators, but could instead promote them. Industry looks forward to being a party in such discussions.