



## THE ROLE OF THE ITALIAN RECYCLING INDUSTRY IN THE ROADMAP TOWARDS EUROPE 2050

RECYCLING, EFFICIENT USE OF RESOURCES, LOW CARBON EMISSION ECONOMY

### PRESS RELEASE

Introduction of the study

**“ECO-EFFICIENT RECYCLING.  
THE ITALIAN RECYCLING INDUSTRY BETWEEN GLOBALIZATION  
AND THE CRISIS CHALLENGES”**

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The Italian separate collection and recycling system coped with the crisis better than others.

Excellent results for all the recycling pipelines.

With 33 million tons of recovered materials, Italy is a leader in the EU, only second to Germany.

Recycling allows to save 53 million tons of CO<sub>2</sub>, i.e. 10% of Italy's emissions.

200 million tons of materials, worth US\$90 billion, are handled on the global market.

The recycling industry is a key component of the European green economy with over 500 thousand employees.

Four lines of action to boost the development of the Italian recycling industry.

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*Brussels, November 28, 2012.* The study and the book **“Eco-efficient recycling. The Italian recycling industry between globalization and the crisis challenges”**, by Duccio Bianchi, Ambiente Italia Research Institute, have been introduced today at the premises of the European Parliament in Brussels.

The study, now at its third edition, was promoted by the Recycling and Recovery Work Team of the Kyoto Club, and requested by the packaging recycling sector made up of CIAL, COMIECO, CONAI, RICREA, COREPLA, and RILEGNO. In the report “Eco-efficient recycling”, Duccio Bianchi provides an overview of the Italian industrial recycling pipeline, which coped positively with the recession and interacts with the world and continental recycled material markets, with several strengths and a number of future challenges.

A few months after introducing the book in Rome before Corrado Clini, Minister of the Environment and of Land and Sea Protection, the promoters of the study deemed it appropriate to submit the interesting output of their work to the attention of the European Members of Parliament and, particularly, to the members of the ENVI and INTR commissions. Such output confirms the importance of recycling as a key strategic option to pursue the targets aimed at a competitive low-carbon economy by 2050, as well as the intermediate targets set for 2020, including a reduction of greenhouse gas emissions, an increase of the amount of energy obtained from renewable sources, and energy saving.

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### The Italian separate collection and recycling system coped with the crisis more effectively than others

While the economic downturn has caused a decline in consumptions and overall waste production, the amounts of materials recovered separately and recycled remained significant in Italy. The recycling rate grew in all sectors and, whenever the domestic industry could not absorb recovery derived materials, surpluses were placed on the international market, whose role is more and more important in this respect.

### Sector trends, by individual materials

Below is a review of the individual product sectors involved in the complex Italian recycling sector. Following the crisis, the iron and steel industry recorded a decline in absolute recycling amounts. On the other hand, the recycling rate grew significantly from 77% before the crisis to 83% in 2009, then settled at 79% in 2010. Primary aluminium production fell by 30% between 2008 and 2010, vs. a mere 5% for secondary aluminium, whereas the separate collection and recycling of aluminium packaging in the two-year period grew by 20% and totalled a record recycling rate of 72.4% of apparent packaging consumption in 2010. Separate plastic packaging collection continued to increase in 2009 and 2010, despite the decline of apparent consumption, fuelling the recycling industry in Italy and, to a minimum extent, in the EU. However, as to paper, the production decline also affected secondary material consumption, and a moderate increase of the recycling rate to approximately 60% - and 80% for packaging alone - was not enough to absorb the high collection rates. Collected amounts were absorbed by the international market, particularly by China. The wood and furnishing sector is traditionally characterized by significant recycling rates. In the wood sector, pre- and post-consumption recovery is significant, both from packaging and from wooden items. Wood packaging collection is of particular importance: the recovery rate vs. apparent consumption was 62.8% in 2010 - the highest value to date.

### Italy as a European leader, only second to Germany

Italy boasts a strong recycling pipeline and recovers 33 million tons of secondary materials, excluding inert materials and organic fractions. In terms of produced amounts, the recycling industry is clearly a European leader, only second to Germany, and has the strongest recycling base among European countries. Collection – and, particularly, separate urban waste collection – continues to grow, also in quantity, in all or almost all the post-consumption collection areas, but was obviously negatively affected by the decline of production in pre-consumption collection areas (which are particularly relevant in certain sectors).

### The environmental benefits of separate collection and recycling

Performing separate waste collection and recycling waste means saving matter, energy, and water, as well as preventing toxic and greenhouse gas emissions. According to the study, recycling in Italy allowed to avoid 55 million tons of CO<sub>2</sub> emissions in 2010 alone, i.e. roughly 10% of the total emissions generated by the country in one year. These benefits are main-

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tained even if recycling does not take place in Italy, but the secondary materials are rather exported. Transport, in fact, has a minimum impact on the process, and the export-related emissions only amount to 8-21% of the emissions avoided through recycling. The study also reveals that, while intensive separate collection systems, such as “door to door”, cause higher emissions as a consequence of the increased use of vehicles, they allow to raise and improve the quality and quantity of recyclable materials, and thus offset such emissions through the environmental benefits produced by recycling.

### National as well as international industry: the role of global material markets

Secondary materials now have a global market, with differences between products: plastic materials, paper, iron scraps, aluminium, and copper have a world market; wood, glass, and lead, on the other hand, have a continental market. Inert materials have both national and subnational markets. World exports of the nine main secondary materials were worth above US\$90 billion in 2010, and the total exported materials amounted to 200 million tons. China plays a major role as an importer of such materials as plastics, paper, aluminium, and copper. The main importer of ferrous materials is, instead, Turkey. Other emerging economies, such as India and Indonesia, are now approaching the secondary materials market, albeit with volumes that are still lower than China's. The US and the advanced European economies dominate the export market. For most advanced economies, the existence of a strong international secondary materials market is a prerequisite to maintain high waste collection and recovery levels.

### Future scenarios: what can we expect when emerging countries start recycling their own waste?

The economic growth of such countries as China, India, or Brazil is increasingly based on domestic demand, rather than on exports towards developed countries. Consumers in emerging countries will generate more waste, which will be managed more and more effectively and will provide materials for recycling. Household waste production in the urban areas of China, for example, is estimated at 160 million tons (2010 data), and industrial waste production is estimated at 2,400 million tons. Hence the international demand for secondary raw materials is doomed to decrease, particularly for low-quality ones.

### Strengthening the recycling industry, a key component of the European green economy

In order to cope with the international evolutionary process, it is therefore important for Italy and Europe to develop the ability to absorb secondary raw materials within their national and continental markets. Recycling is, in fact, one of the most dynamic components of the green economy at European level. The turnover produced by the recycling of the seven main recyclable materials (glass, paper, plastic, ferrous materials, copper and aluminium, precious metals, and other metals), in fact, has almost doubled (at current prices) from 32.5 billion EUR in 2004 to 60.3 billion EUR in 2008. And following the economic downturn, which affected Europe

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between late 2008 and early 2009, quotations and consumptions in 2010 reverted to levels that are comparable to and, in some cases, above those of 2008.

The overall eco-industry at community level (EU 27) saw a turnover increase from 232 billion EUR in 2004 to 319 billion EUR in 2008, with a nominal annual 8.3% growth rate (and a value equal to 2.5% of the European GDP), and the recycling sector was the most dynamic one, following the renewable energy sector, with a 17% annual growth rate.

Moreover, after waste management and water procurement, recycling – even excluding the related manufacturing industry – is the most important eco-industrial sector in terms of employment, with over half a million standing employees.

### Four lines of action to boost the development of the Italian recycling industry

While strengthening the recycling industry is a unique opportunity to promote growth, employment, and independent procurement, the main levers should be identified. Four elements, in particular, are important:

1. The market of products recycled via the so-called “green procurement”. It is demonstrated that recycling-based products now cost just as much as similar products obtained from raw materials with the same performance, but also allow significant “system-level saving”, considering their usage cycle and the avoided disposal costs.
2. Energy recovery as a subordinated, equally viable, option. Full compliance with the priorities specified by the community hierarchy, also avoiding incentives that could lead to alter it for economic profit. Creation of a true market for high-quality alternative waste-derived fuels to substitute fossil fuels in high-consuming systems for the types of materials that the recycling industry still cannot absorb, or aimed at generating electric and/or thermal power for completely biodegradable residues, wherever such use provides a greater, or at least comparable environmental benefit as a result of optimized transport for subsequent recovery.
3. System integration to improve the quality of recovered secondary materials, in particular from post-consumption collection systems.
4. Research & Innovation. For example, rare metal recycling is one of the most sensitive development areas, where specialized companies are being established elsewhere in Europe and in other advanced countries. These metals – including gallium, germanium, and indium – also play a key role in the production of micro-electronics and of renewable energies (photovoltaic, fuel cells). The demand for some of these metals estimated for 2030 is 2 or 4 times as high as 2006 production levels.

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