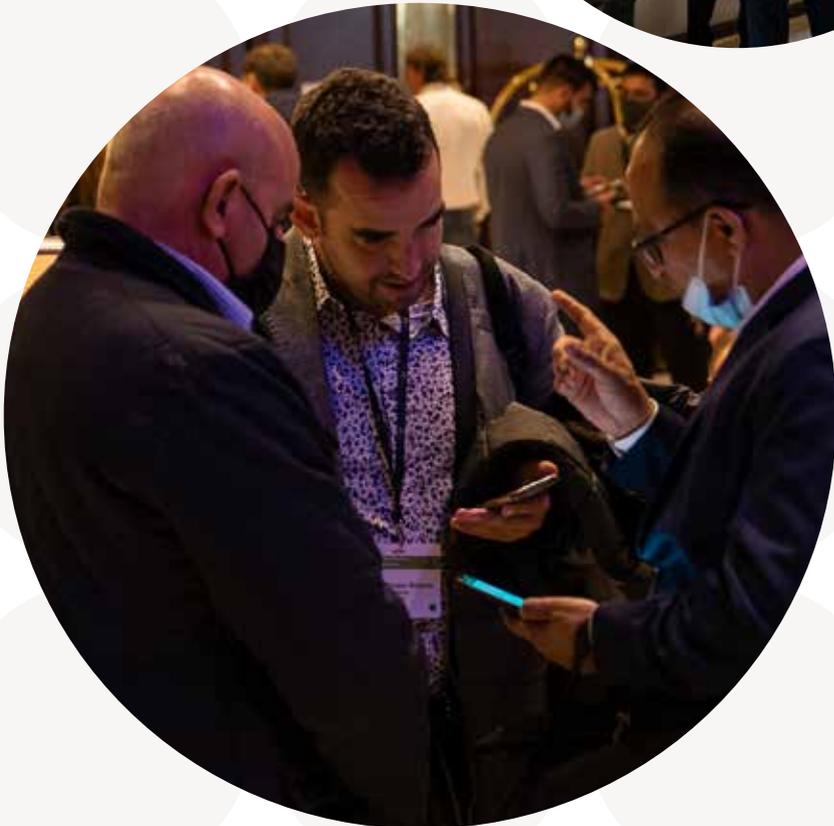


ANNUAL REPORT 2021





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This Annual Report was completed several weeks before the Ukraine crisis unfolded. Therefore, the content does not reflect recent dramatic events and their impact around the world.

# WORDS FROM THE **PRESIDENT**

COVID-related restrictions were gradually lifted in 2021, allowing us to meet for the first time in more than two years at our Global Trading Forum in Brussels. Uncertainty regarding the pandemic and limited choice of venues did not allow us to put on a full Convention, but nevertheless it was a huge success with attendance surpassing expectations. It was wonderful to be able to meet everyone in the flesh, particularly from a personal perspective as it was only my second in-person meeting during my tenure as President.

“Our industry continues to be on the receiving end of poorly-worded or misguided comment and even downright lies.”



From a business perspective, 2021 certainly proved to be a marked improvement on 2020, with strong trading conditions throughout the year as the world tried to return to some kind of normality. However, despite all of the positive aspects of 2021, I am of the view the recycling industry needs to be more united than ever over the challenges to be faced in the future.

“Recycling is such an important thing for us to do to maintain life on Earth.”

These are not my words or those of any company owner with a vested financial interest in promoting recycling. These words were spoken by Lucy Hawking – daughter of legendary scientist Stephen Hawking – in her Keynote Address to BIR’s webinar programme last May, during which she celebrated her father’s advocacy of “the need to take climate change seriously”.

Only a few months before he died in early 2018, he made the pro-recycling assertion that “our physical resources are being drained, at an alarming rate”. Of his deep environmental convictions, Lucy

added: “He spoke about it and wrote about it way before it really entered the public consciousness. He saw the science and he saw the evidence, and he realised where it was going.”

In effect, one of the cleverest people ever known to this world was able to grasp – completely and unequivocally – the fundamental importance of recycling in changing humankind’s relationship with the planet. So with environmental awareness at an unprecedented peak, surely this should be a Golden Age for recycling and for the industry that, for many generations, has taken responsibility for conserving resources and cutting carbon emissions?

Sadly not.

As you will read in some of the excellent contributions to this Annual Report, our industry continues to be on the receiving end of poorly-worded or misguided comment and even downright lies that not only skew public perceptions but also, in some instances, further the cause of truly Bigger Business – all to the detriment of the environment.

But the attack on recycling goes even deeper than denigration of its most experienced practitioners; it is increasingly enshrined in the laws and policies directly impacting our industry.

Just imagine for a moment that you're the leader of a major developing country. At the COP meeting in Glasgow, you come under pressure to decarbonize your economy – with some of that pressure coming from developed countries which have already plundered largely primary resources in achieving their industrial maturity.

Recognizing the value of using scrap rather than primary raw materials as one of the most direct and effective means of reducing industrial carbon emissions, you ask your advisors to draw up a plan aimed at maximizing scrap ratios. Even though money is limited and the demands of the social budget are many, you direct billions of dollars into the replacement of existing technologies with ones that enable a transition from the use of primary resources to, instead, the use of scrap.

As your economy is still growing, per-capita consumption of goods is still way below that of developed countries whose populations have had decades to enjoy all the trappings modern life has to offer. So your scrap generation levels – while growing at a rapid rate – are still relatively low, and certainly too low to satisfy all of your industrial needs.

Therefore, you have no option but to import high-quality secondary raw materials in order to continue on your decarbonization mission and towards a more sustainable environment that will benefit the whole planet.

And then a host of developed economies – let's call it the European Union, for argument's sake – club together to tell you that this is "waste" and that they are changing their shipping regulations so that they will no longer be sending you any scrap....

I have turned this anomalous situation over in my head many, many times and can make no sense of it. Above all, it strikes me as a monumental failure to view the Circular Economy as it should truly be seen, as a global undertaking.

In 2021, European recycling associations affiliated to BIR wrote to the European Commission and the European Parliament to highlight the potentially disastrous effects of a blanket restriction on EU exports of recycling materials. They also called for a clear distinction in the legal regime between "problematic waste streams" and raw materials tailored to consumer needs using high-tech recycling processes.



**Tom Bird**  
BIR President

This legal conflation of "waste" and "secondary raw materials" has been at the core of many of our industry's greatest ills for more than 30 years. Just as some of the world's most brilliant minds have appreciated the importance of recycling, surely it is not beyond the capabilities of our highly intelligent rule-makers to engineer such an important distinction between garbage and the specification raw materials produced by our industry.

I would urge you all to become involved in this debate, to promote the truth about our industry's exceptional skills and to challenge misconceptions about what we do. Our unity of purpose and of voice remain crucial if we are to win through.

BIR will continue to be on the front line, working with our National Associations in the fight to preserve the interests of our members and the recycling industry as a whole. Global free trade in recycled raw materials is essential for a truly global Circular Economy.

I look forward to welcoming everyone to Barcelona in May at what will be our first full Convention since Budapest in 2019.

# BIR AT A GLANCE

Represented in

**67**

countries

More than

**700**

BIR members  
in the world

**8**

commodities:

- Iron & steel
- Non-ferrous metals
- Stainless steel/alloys
- E-scrap
- Paper
- Textiles
- Plastics
- Tyres/rubber

**38**

national recycling  
associations representing  
more than

**30,000**

companies

**2**

World  
Recycling  
Conventions  
per year

# BIR'S FINANCIAL SITUATION

Here we are again, having made it through another challenging year in 2021. Who would have thought that, after the vaccines and booster shots, COVID would have continued to throw us many more curve balls? And yet we have managed to move on.

We took up the challenge and, in Brussels last October, were able to organize an excellent face-to-face meeting for the first time in two years. **Under the leadership of our President Tom Bird and our Director General Arnaud Brunet, the BIR team worked tirelessly** – from home and from the office – to make sure everything was done so that the event could actually take place. Our timing was perfect and I was happy to see many old, but also many new, faces and especially many young traders. This certainly was one of my highlights of 2021.

The revenue from this Global Trading Forum in Brussels, albeit small, was **a welcome addition to our membership revenues** which we managed to keep stable, not least thanks to the efforts of our Membership Committee Chairman Fadi Shahrour, his fellow Committee members and our membership team in Brussels. On behalf of the BIR Finance Committee, I can therefore report **that we continue to be flexible with our projections and budgets**, and that the steady work of our Executive Committee,

along with our Secretariat, has allowed us once again to **control costs and expenditures in order to remain within the budget projections for 2021.**

BIR continues to invest in improved services to our members while working hard towards **the return of two in-person meetings in 2022**: Barcelona in May and Dubai in October. Our communications department continues to push to support our members with **an ongoing flow of information**, either in the form of statistical and market publications or of newsletters and social media posts. At the same time, **our regulatory monitoring and lobbying activities** provide maximum visibility and leverage at the highest political levels in support of the concerns and interests of the international recycling industry.

**I can assure you that you can count on us as we continue to count on you.** The whole BIR team and I are looking forward to seeing you in person again in 2022. May we all continue to prosper in our businesses and stay healthy in the future.



**Andy Wahl**  
*TAV Holdings Inc. (USA)*  
BIR Treasurer

“The revenue from this Global Trading Forum in Brussels, albeit small, was a welcome addition to our membership revenues.”

# DIRECTOR GENERAL'S REPORT

Winston Churchill once said: "If you are going through hell, keep going."

**In retrospect, this is what 2020 and 2021 felt like. They were difficult, stressful, a succession of ups and downs, of stop and go. But we kept going. And although 2021 was indeed difficult, much of what really stands out when I look back on the year is positive.**

In general, **we have now learned to live with the pandemic.** This was something that initially inspired fear in most of us and yet humankind has ultimately found a way to get on with life. Although COVID sadly robbed some of friends and family members, we have now all decided that it cannot be allowed to put a stop on our lives and on our normal day-to-day activities.

The recycling industries around the globe have been under **pressure from external factors, especially logistics, energy costs and labour shortages.** However, most commodity markets have remained solid and businesses have been very active and prosperous. Yet again, **the recycling industry has shown an amazing resolve** not only to survive but also to build new opportunities.

As the global recycling association, BIR has kept its finger on the pulse by **staying in close touch with its members,** assisting companies with our wide range of services through our many electronic channels such as our website, news

bulletins and social media feeds. And we finally achieved an important step towards a return to normality when, in Brussels last October, **we celebrated our first "physical" networking event since the start of the pandemic.**

Organizing this Global Trading Forum was a **major achievement** given the context of still highly restrictive health regulations and travel barriers. In the end, it proved to be a **huge success** that well exceeded our expectations. I believe that, for many of our members as well as for us within the BIR Secretariat, this was a **major milestone** along the road to what we all hope will be a full return to the lives we knew before the pandemic. Seeing so many optimistic and smiling faces (although masked!) made the outlook seem all that more encouraging.

**Our membership has been incredibly strong and loyal.** Given the circumstances and the high levels of uncertainty, this can be considered a major achievement. We have maintained healthy membership revenues and have kept our expenses

under strict control while delivering an impressive number of services to our members. We have used all our media options – traditional and social – to keep our members supplied with the most up-to-date market and regulatory information, as well as with all the latest data of importance to their businesses.

We have continued to benefit from the **active co-operation of our incredible network of national association members around the world.** Regular online meetings not only permitted the sharing of news, information and best practices, but also ensured the global consolidation of approaches, messages and actions.

What I do know for sure is that **our industry continued to be essential** in the COVID-hit years of 2020 and 2021, and that it will become increasingly vital for our planet in the coming years. We have a global responsibility and we will deliver. BIR has fought unnecessary or unreasonable regulations and restrictions that would serve only to limit our **ability to operate in a free trade environment**



**Arnaud Brunet**  
BIR Director General

and hence miss the objectives of a true Circular Economy. We are continuing on this mission in 2022.

BIR has defended the industry's interests and has provided irrefutable evidence of the added-value we offer in the areas of global free trade, decarbonization and the Circular Economy. The products our industry produces and in which it trades are **essential raw materials, not waste**.

In this year's Annual Report, you will find detailed descriptions of the many issues that BIR has been monitoring and the many actions it has been taking on your behalf. You can be proud of the **incredible leadership and commitment** of those who, as members like yourselves, drive the many actions and decisions of BIR for the benefit of the entire membership.

From this solid base, we are continuing with **our strong, multi-level advocacy work** in support of the recycling industry while, at the same time, organizing our two in-person Conventions scheduled

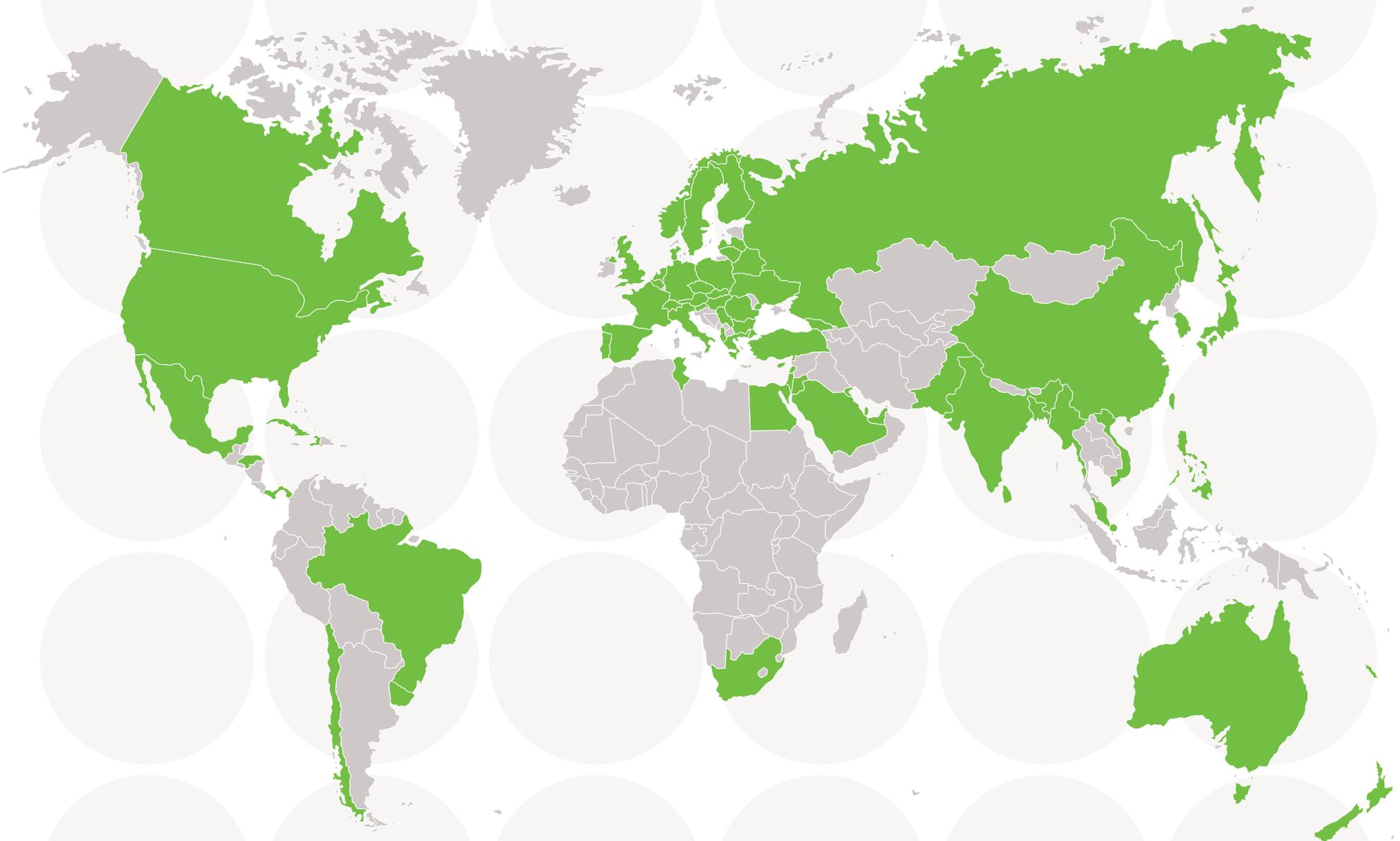
for 2022, starting with Barcelona in May. Fingers crossed, and if the planets align, these endeavours will be a great success.

Lastly, I would like to thank once again our BIR leadership for its support, starting with President Tom Bird and Treasurer Andy Wahl, the members of the Executive Committee and all other BIR executives, and the Secretariat team for its **capacity to deliver an incredible service to members in such difficult times**. And last but not least, I would like to **thank you, our members, for your loyalty and trust**.

"BIR has defended the industry's interests and has provided irrefutable evidence of the added-value we offer in the areas of global free trade, decarbonization and the Circular Economy."



# MEMBERSHIP SPREAD 2021



 Countries in which BIR is represented

## **Western Europe**

Austria  
Belgium  
Cyprus  
Denmark  
Finland  
France  
Germany  
Greece  
Italy  
Netherlands  
Norway  
Portugal  
Spain  
Sweden  
Switzerland  
United Kingdom

## **Russia & Eastern Europe**

Albania  
Belarus  
Bulgaria  
Czech Republic  
Georgia  
Hungary  
Latvia  
Lithuania  
Poland  
Romania  
Russia  
Serbia  
Slovak Republic  
Slovenia  
Ukraine

## **Asia**

Bangladesh  
China  
India  
Japan  
Malaysia  
Pakistan  
Philippines  
Republic of Korea  
Singapore  
Sri Lanka  
Taiwan (China)  
Thailand  
Vietnam

## **Central & South America**

Brazil  
Chile  
Cuba  
Haiti  
Honduras  
Mexico  
Uruguay

## **Turkey & Middle-East**

Bahrain  
Israel  
Jordan  
Lebanon  
Qatar  
Saudi Arabia  
Turkey  
United Arab Emirates

## **North America**

Canada  
Panama  
USA

## **Australia & Pacific Rim**

Australia  
New Zealand

## **Africa**

Egypt  
South Africa  
Tunisia

# LIST OF BIR MEMBER ASSOCIATIONS

## **BRAZIL**

- INESFA – Brazilian Association of Iron and Steel Scrap Companies

## **BULGARIA**

- ARTSHC – Association of Recyclers and Traders of Second Hand Clothes
- Association for Textile Recycling
- BAR – Bulgarian Association of Recycling

## **CANADA**

- Canadian Association of Recycling Industries (CARI)

## **CHILE**

- Asociación Nacional de la Industria del Reciclaje AG (ANIR)

## **CHINA**

- China Association of Metal Scrap Utilization (CAMU)
- China Nonferrous Metals Industry Association Recycling Metal Branch (CMRA)

- China Sustainable Plastics Association (CSPA)
- China National Resources Recycling Association (CRRA)

## **CUBA**

- Grupo Empresarial de Reciclaje

## **EUROPE**

- European Recycling Industries' Confederation (EuRIC)

## **FRANCE**

- Fédération des Entreprises du Recyclage (FEDEREC)

## **GERMANY**

- Bundesvereinigung Deutscher Stahlrecycling- und Entsorgungsunternehmen e.V. (BDSV)
- Bundesverband Sekundärrohstoffe und Entsorgung e.V. (BVSE)
- Verband Deutscher Metallhändler e.V. (VDM)

## **HUNGARY**

- Hungarian Waste Management Federation (HOSZ)

## **INDIA**

- Inland Importers & Consumers Association (IICA)
- Material Recycling Association of India (MRAI)

## **ITALY**

- ASSOFERMET

## **JAPAN**

- Japan Iron & Steel Recycling Institute (JISRI)

## **MALAYSIA**

- Malaysia Non-Ferrous Metals Association

## **THE NETHERLANDS**

- Dutch Waste Management Association (DWMA)

## **POLAND**

- Economic Chamber of Non-Ferrous Metals and Recycling (IGMNiR)
- Scrap Economy Chamber of Industry and Commerce (IPHGZ)

## **ROMANIA**

- Organizația Patronală Și Profesională „REMAT”

## **RUSSIA**

- National recycling association „RUSLOM.COM”

## **SOUTH AFRICA**

- Metal Recyclers Association of South Africa (MRA)

## **SPAIN**

- Federación Española de la Recuperación (FER)
- Gremi de Recuperació de Catalunya
- Asociación Española de Recuperadores de Papel y Cartón (REPACAR)

## **TURKEY**

- Aged Recovered Paper Industrialists Association
- TÜDAM Değerlendirilebilir Atık Malzemeler Sanayicileri Derneği

## **UNITED ARAB EMIRATES**

- Bureau of Middle East Recycling Inc. (BMR)

## **UNITED KINGDOM**

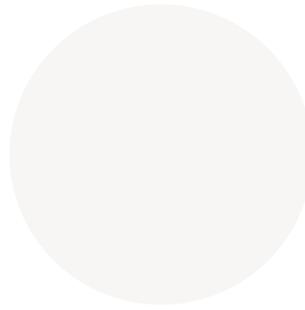
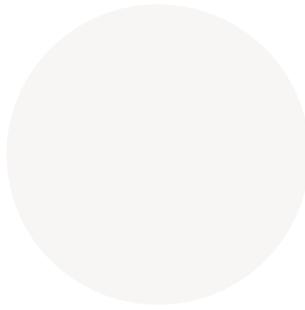
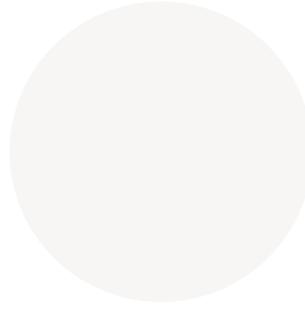
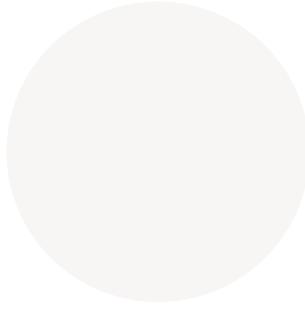
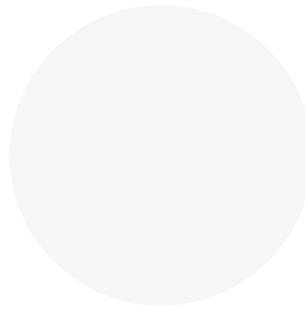
- British Metals Recycling Association (BMRA)
- The Recycling Association
- Textile Recycling Association

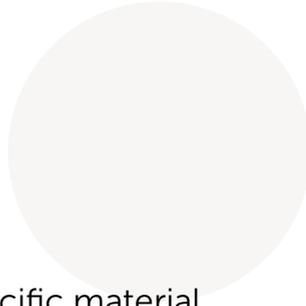
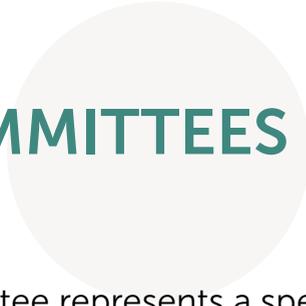
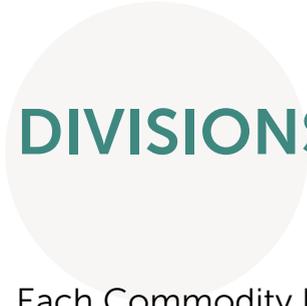
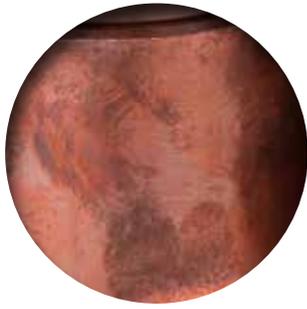
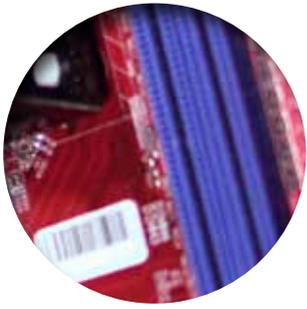
## **UNITED STATES**

- Institute of Scrap Recycling Industries, Inc. (ISRI)

**38**

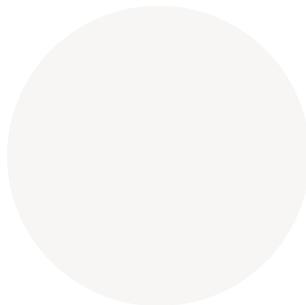
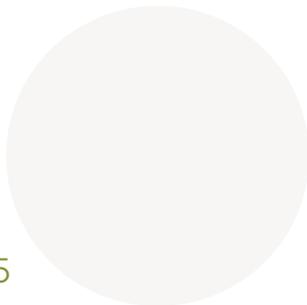
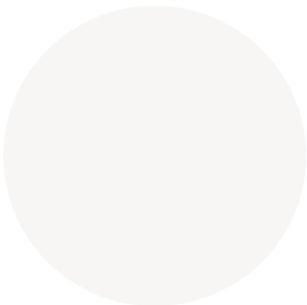
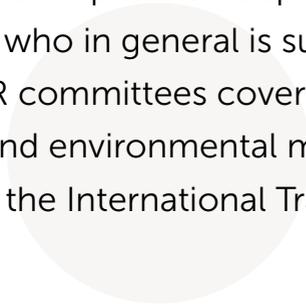
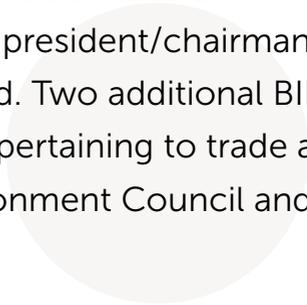
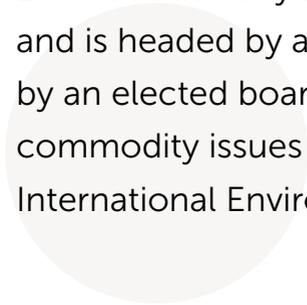
**national recycling  
associations  
affiliated  
to BIR**





## DIVISIONS AND COMMITTEES

Each Commodity Division and Committee represents a specific material and is headed by a president/chairman who in general is supported by an elected board. Two additional BIR committees cover cross-commodity issues pertaining to trade and environmental matters: the International Environment Council and the International Trade Council.





## FERROUS DIVISION

Let me first put on record how immensely honoured I feel to have been elected President of the BIR Ferrous Division and how committed I am to carrying on the excellent work of my predecessor Greg Schnitzer, who steered the ship through one of the most challenging periods in the ferrous scrap sector's history.

One of the advantages of following in a long line of skilled Presidents is that I inherit many **highly impressive initiatives** from their time in office. This includes the quarterly **"World Steel Recycling in Figures"** analysis (compiled by our esteemed Statistics Advisor Rolf Willeke) which, for more than a decade, has enabled us to quantify the contribution of our industry to **more sustainable iron and steel production** around the world.

According to the two most recent analyses at the time of writing this report, steel scrap usage growth slowed as we headed into the second half of last year after a rampaging opening two quarters. Most notably, **China's steel scrap consumption soared 47.1%** in the first six months of 2021 whereas, year on year, the country's usage was only 18% higher by the end of the third quarter.

On the upside, it should be added that **higher scrap use is now part of China's DNA** as it bids to limit CO<sub>2</sub> emissions from crude steel production. The nation's scrap ratio is still well below those of, for example, the USA and many European countries, and so

there remains plenty of scope for further growth.

This deceleration in global scrap usage growth reflects **a year of two halves for steel output**. According to the World Steel Association (WSA), the **global crude steel production total of 1.004 billion tonnes for the first half of 2021** was an impressive 14.4% higher than in the corresponding period of 2020 which, of course, was more badly affected by COVID-related restrictions on industry, travel and other aspects of normal daily life. Double-digit percentage increases were recorded every month for the entire March-to-June period, with the peak coming in April when **crude steel production was an astonishing 23.3% above that of the same month in 2020**.

By the middle of 2021, however, this growth was starting to lose its momentum, to the extent that **world steel production in the second half of the year was almost 100 million tonnes lower than in the first six months**. China, of course, was a major factor: having produced 563.3 million tonnes in first half of 2021 (up 11.8% year on year), this dropped to 469.5 million tonnes in the second half to



**Denis Reuter**  
 TSR Recycling GmbH &  
 Co. KG (DEU)  
 President Ferrous Division

“In looking ahead, we have ample reason to believe in a bright future for scrap usage.”

give a production total that, for the year as a whole, was 3% down on 2020.

So what can we expect for the balance of 2022? The WSA’s outlook published last October projected that **a global steel demand spike of 4.5% in 2021 would be trimmed to a 2.2% increase** this year, with no growth at all anticipated in China given the combination of its renewed environmental focus and depressed real estate sector.

Orders for steel, and thus for scrap, were always likely to lose some of their impetus once the pent-up demand created by the pandemic had been largely satisfied. In looking ahead, however, we have ample reason to believe in **a bright future for scrap usage**. At our BIR Ferrous Division webinar last November, McKinsey & Company’s Senior Knowledge Expert Dr Steven Vercammen argued very persuasively that **the global imperative to reduce carbon emissions would create a major opportunity** to grow the scrap share of crude steelmaking raw materials beyond its current average of around 30% – even to the point of achieving a price disconnect to coking coal and iron ore.

Dr Vercammen contended that China’s scrap consumption had the potential to double over the next 30 years while Lee Allen of Fastmarkets, our guest speaker in May, made note of suggestions that China’s annual imports of ferrous scrap could soar to around 10 million tonnes in the coming years.

And yet there were clouds on the horizon as we entered 2022, including **proposed changes to EU shipment regulations** that had the potential to heavily restrict exports to many parts of the world. So while the globalized and environmentally-driven demand for ferrous scrap further underlines the importance of free trade, shipping rules are increasing their stranglehold on our industry.

This defies reason and must be challenged at every opportunity.

## Key Facts

January-September 2021  
**steel scrap consumption**  
 (million tonnes)

		year on year
China	<b>183.2</b>	(+18%)
EU-27	<b>66.4</b>	(+21.1%)
USA	<b>38.2</b>	(+17.4%)
Japan	<b>25.8</b>	(+21.8%)
Turkey	<b>25.6</b>	(+19.1%)
Republic of Korea	<b>21.2</b>	(+11.5%)
Russia	<b>21.2</b>	(+9.9%)

“The best word to define events in 2021 is ‘unprecedented’, with every development coming heavily masked such that it was hard to know the reality behind it.”

## KEY FACTS

### Intra-day price volatility of up to 5%

#### LME copper in 2021 (per tonne):

Start of year: under US\$ 8000  
Peak in May: almost US\$ 11,000  
Year-end: around US\$ 9700

#### LME aluminium in 2021 (per tonne):

Start of year: under US\$ 2000  
Peak in October: around US\$ 3200  
Year-end: around US\$ 2800

## NON-FERROUS METALS DIVISION

Reflecting on the key events for our industry in 2021, I am reminded of a riveting Formula 1 race: a wet track, corners hard to negotiate, steep declines and sharp inclines, a couple of crashes, safety cars bringing only temporary order, and the season ending with an historic photo finish. In the same way, the non-ferrous market kept us on the edge of our seats throughout the year, inducing tremendous excitement but also high levels of anxiety.

Extreme volatility emanated regularly from events which were often unforeseen or unforeseeable. The big moves were frequently masked by a rash of theories, leading to contradictions and chaos. In the end, our industry not only survived this turbulent period but most companies ended up achieving better performances and boosting their profits. I salute our industry for displaying such a spirit of resilience, courage and hope; our ability to adapt to conditions and to convert challenges into opportunities has been a true silver lining in the dark COVID cloud.

So let us run through those major events of 2021 that affected us all most keenly. Perhaps most notably for an industry that is so heavily dependent on international trade, massive disruption to global scrap flows was created by a combination of the mayhem afflicting sea freight rates, logjams at many major ports and shortages of containers as well as other equipment. Amid this carnage, the world's top 10 shipping lines continued to reap windfall profits, estimated at a combined US\$ 115 billion to US\$ 120 billion in 2021. Should we be surprised?

Keeping to the theme of international trading, several Asian countries took what can only be described as retrograde steps in 2021 by creating their own, more stringent frameworks for scrap imports. Having started with further updates of China's National Sword policy, this was followed by countries like Indonesia and Malaysia implementing new laws that were of a similar tone and tenor.

And then in November last year, the European Commission finally came forward with its proposed new guidelines for waste shipments which, most importantly for our sector, also cover exports of scrap materials. If these guidelines are adopted in their current form, it will mean even more restrictions on shipments from Europe to non OECD countries. With overtones of creating an economic nationalism for raw materials under the guise of pushing a circular economy agenda, the guidelines would appear to choke the spirit of free global trade for our clean and “green” scrap.

India has also started work on creating new standards for metal scrap which will

apply to all domestic and international transactions. Given that the country is a key market for many of the world's "green" raw materials, we must watch this space closely in 2022.

Turning to some of last year's other highlights, we saw the return of voracious consumer demand – to the extent of surpassing pre-COVID levels in many instances. Most metal-consuming industries – including automotive, white goods, construction, packaging and engineering – registered growth despite the ongoing swathe of pandemic-related uncertainties.

Among other monumental developments in 2021, prices on the London Metal Exchange recorded historic highs with backwardations in most metals, pointing up high demand for "spot" materials. Intra-day volatility touched 5% at times.

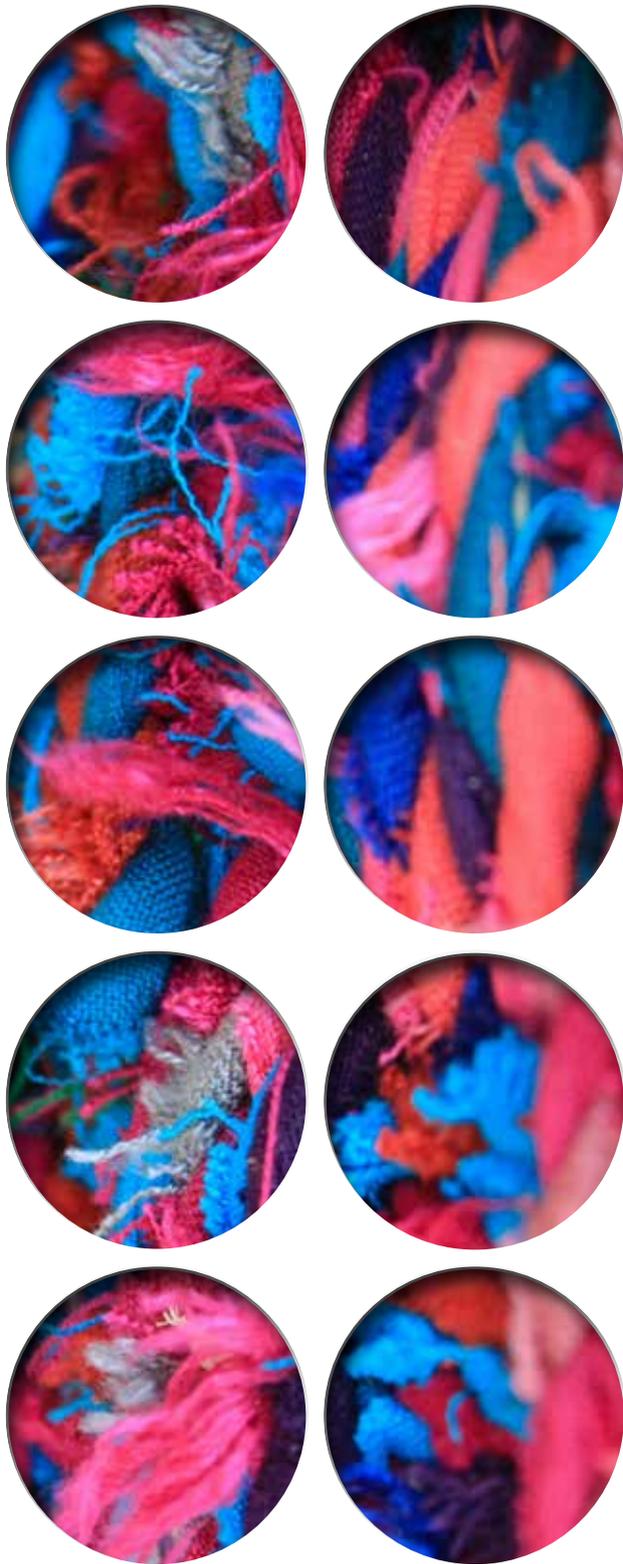
Meanwhile, geopolitical issues sent energy prices into the stratosphere and caused major disruption to supply and distribution networks. At the same time, supply cutbacks in China affecting vital alloying elements such as silicon, manganese and magnesium and a global shortage of semiconductors brought further chaos to already-stressed metal production lines.

The best word to define events in 2021 is "unprecedented", with every development coming heavily masked such that it was hard to know the reality behind it. But as an industry, we stayed in the game and scored when there was an opportunity.



**Dhawal Shah**  
*Metco Ventures LLP (IND)*  
President Non-Ferrous  
Metals Division

Visibility with regard to 2022 remains low as I write this report in the early weeks of the year: the Omicron variant continues to spread its tentacles and the fragility of the markets is palpable. But I do believe that our experiences in 2021 have made us wiser and stronger. We have further refined our existing powers to adapt and to respond even more effectively to ever-changing circumstances. And so it is with a sense of optimism and positivity that I wish you all continued success in 2022.



## TEXTILES DIVISION

Every year, the used clothing and textiles recycling industry is confronted with two distinct types of challenge: first, the day-to-day issues that undermine the efficiency of our companies' operations; and second, the more strategic problems that, in many cases, have existed for years but remain largely intractable.

In terms of daily business challenges, the most notable in 2021 concerned the ongoing shipping crisis brought about principally by the COVID pandemic, with a lack of container availability leading to soaring costs and regular delays throughout last year. The costs of obtaining containers for exporting out of Europe have more than doubled and shipments that would normally be completed in a matter of weeks are now, in many instances, taking months. Thus, the practicalities of trading have become increasingly difficult and profit margins are being squeezed.

As for the more underlying challenges facing our sector, one of these was discussed in detail at our divisional webinar in November last year – namely, ill-informed media coverage of what happens to exported used clothing in destination markets. So often, articles in the press and online are not properly researched or reflect a lack of understanding on the part of the journalist or writer. For our industry, such misinformation always comes as a regrettable and time-consuming distraction.

The used clothing and textiles recycling industry generates major environmental benefits in the form of reducing not only greenhouse gas emissions but also water/air pollution and resource consumption.

And yet in 2021, there was constant repetition of claims about clothing sent to Ghana which were based on research that was neither published nor peer-reviewed. The coverage centred on what seems to be a local issue; the journalists did not seek out the real truth and had failed to understand or consider the potentially much wider negative consequences of what they were saying.

As noted at our webinar, international trade creates social benefits too, including the promotion of gender equality in Africa where the second-hand clothing sector has provided major opportunities for female entrepreneurs.

Positive steps are now being taken by industry stakeholders from Europe and North America to highlight not only what good practice looks like but also the very real environmental, social and economic benefits delivered by our sector. Various

collaborative actions were initiated in 2021 and, by the end of 2022, we intend to be in a position to provide robust research and evidence that showcase our industry's important work.

Another area in which activities will gather yet more momentum in 2022 concerns changes to **government policies to promote the sustainability of fashion**. Expansion of extended producer responsibility (EPR) schemes into different countries will bring both challenges and opportunities. On January 1 2022, Sweden became the second country in the world to introduce **EPR on clothing**. In the UK, meanwhile, its Parliament passed key primary legislation in 2021 also aimed at EPR for clothing, with the government committing to the completion of a consultation exercise on the introduction of such a scheme by the end of this year. Furthermore, the Dutch government has made a commitment to introduce EPR on clothing in 2023 while overtures to establishing similar schemes have been heard elsewhere in Europe and beyond.

The **ongoing development of the EU Textiles Strategy** is also expected to have a significant impact on our sector. With greater emphasis on improving the **circularity of the fashion industry**, we can expect to see more stakeholders moving into this field and retailers taking greater interest in what happens to the clothing they put on the market. Undoubtedly, there will be increased interest among



**Martin Boeschen**  
*Texaid-Textilverwertungs  
AG (CHE)*  
President Textiles Division

retailers and brands in producing garments from "sustainable" raw materials, such as recycled fibres.

But while this is a welcome development in principle, we need to be very careful to ensure that **good-quality reusable clothing** is not unnecessarily dragged down the waste hierarchy and sent for recycling. Reuse of clothing, wherever that demand is to be found, is better than needlessly sending those same items for recycling. We need to ensure that the EU understands this fundamental truth and that it avoids the introduction of any measures which would adversely affect steps to address climate change, impair **United Nations sustainable development goals** or contravene the waste hierarchy.

"So often, articles in the press and online are not properly researched or reflect a lack of understanding on the part of the journalist or writer. For our industry, such misinformation always comes as a regrettable and time-consuming distraction."

## Key Facts

Estimates suggest that the mandatory **separate collection of used textiles in the EU** by 2025 will increase volumes from

**2.7 million tonnes**  
in 2021

to **4.7 million tonnes**  
over the next couple of years.

“While demand for our materials remained pleasingly healthy throughout 2021, our business activities were still thrown into turmoil by the unrelenting practical and financial challenges relating to transportation.”

## KEY FACTS

Freight rates soared

>300%

between September 2019  
and October 2021

Source: BIR Paper Division Past  
President Ranjit Singh Baxi speaking  
at divisional webinar last November.

## PAPER DIVISION

2021 was a truly exceptional year in ways that were so distinct from its predecessor. Whereas 2020 had been dominated by the impact of COVID on our normal working practices and on patterns of demand, last year was characterized by unusually sustained high prices for recovered fibre that were linked to the global economic recovery and to the end of many pandemic-related restrictions. Mills all around the world got back on track and so demand for our materials was consistently strong.

That strength of demand should persist in 2022 given that analysts are predicting further, albeit decelerating, economic expansion. The World Bank Group, for example, expects growth of around 5.5% in 2021 to be followed by a reduced 4.1% gain this year owing to COVID flare-ups, diminished fiscal support and lingering supply bottlenecks, with a 3.2% increase envisaged for 2023 as pent-up demand wanes and supportive macro-economic policies continue to be unwound.

For our own industry, the most eye-catching and disturbing element of these forecasts concerns the reference to **persistent supply issues**. While demand for our materials remained pleasingly healthy throughout 2021, our business activities were still thrown into turmoil by the unrelenting practical and **financial challenges relating to transportation**. Freight costs remained very high amid a lack of available containers, many of which became tied up at or outside ports of destination as a result of COVID, thus impeding long-haul export activity. Services also became more unreliable,

with fewer sailings available and almost inevitable delays.

At our Paper Division webinar in November last year, guest speaker Florent Noblet of French transport and logistics trade body Union TLF was gloomy about the prospects of a rapid cure for this massive shipping headache, suggesting **significant disruption could persist well into 2023**. So clearly, we should prepare ourselves for a further onslaught of delays, blank sailings, roll-overs, port congestion and elevated freight rates.

In other ways too, 2021 was far from plain sailing for those recovered fibre businesses relying heavily on export markets. The latter part of the year brought a **cessation of EU shipments to India** as a result of an error by the Indian authorities which, it was anticipated, would not be resolved before February 2022; administrative errors are a part of life and must be accepted as such, but this oversight relating to a key recovered fibre market certainly did not help our exporters' cause in 2021.

To add to their woes, the Malaysian government has followed in the footsteps of China and Indonesia by introducing **stricter controls on recovered fibre imports**, including pre-inspection in the country of origin.

Exporters also took a heavy blow in November last year with the release of the European Commission's proposal for **revising the EU Waste Shipment Regulation**. By seeking to restrict exports beyond the EU, this risks being counter-productive if there is no reciprocal restriction on recovered fibres entering the EU under the status of waste as well as stronger requirements on manufactured products imported into the EU.

In these circumstances, **a proper status for raw materials derived from recycling** would appear to be an excellent solution. France published end-of-waste legislation on December 13 last year, based on the EN643 standard, with the aim of smoothing movements of our industry's raw materials by **classifying recovered paper as a product rather than waste** so long as it meets specific quality criteria. Spain and Italy are among those countries



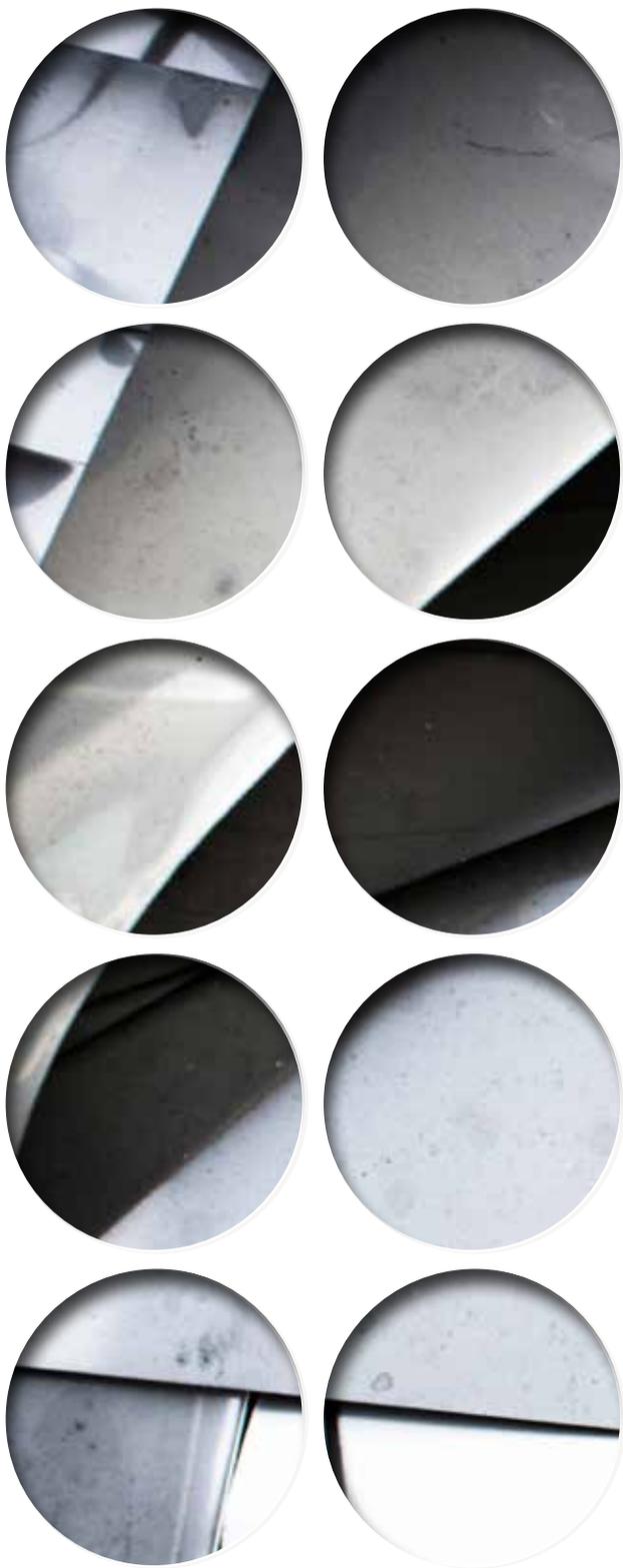
**Jean-Luc Petithuguenin**  
*Paprec Recyclage (FRA)*  
President Paper Division  
*(until November 2021)*

to have gone down a similar route in the hope of gaining recognition at EU level for this approach.

While 2021 saw demand being sustained by increased local sourcing activity, we cannot escape the fact that **international trade in recovered fibre will remain essential** for the foreseeable future in order to balance surpluses and deficits around the world and to ensure that all nations have an opportunity to base their industrial development on the use of our high-quality, sustainable raw materials.

The circular economy will achieve its full potential only when it is treated as truly global.





# STAINLESS STEEL & SPECIAL ALLOYS COMMITTEE

In reviewing any year some weeks after it has ended, there is always the possibility of a significant change taking place in the interim. So it is that we spent a large part of 2021 expecting some sort of market correction – early signs of which duly arrived in early 2022 with a marked downturn in sentiment.

In my introductory comments to our World Mirror in October last year, I highlighted **remarkable price increases** for all stainless steel-related raw materials and consequently elevated sales prices for all finished products, but I also warned that final consumption patterns were sending clear signals that the **markets were struggling** to digest all the necessary increases.

Data from the International Stainless Steel Forum confirmed that **global melt shop production rebounded significantly** beyond pre-COVID levels last year, leaping 10.6% to 56.3 million tonnes. However, there were clear signs of a deceleration in the latter half of 2021: production of more than 14.5 million tonnes in each of the first two quarters of last year compared to less than 14 million tonnes in quarters three and four.

In Europe, the bubble certainly started to deflate rather than burst at the start of 2022. Producers reported thinner order files as customers resisted the **higher sales prices** brought about by the steeping costs of everything from energy

to electrodes and from ferro-silicon to stainless scrap.

Demand has also continued to be impacted by pandemic-related effects on the stainless steel supply chain. During BIR's webinar programme late last year, we learned that the time gap at ports between anchoring vessels and unloading containers could be up to 12 days and that two out of three ships worldwide were suffering delays to their schedules. **Shipping certainly became no easier** in the remaining months of 2021 and in early 2022.

Other factors have also served to dampen European mills' order intakes, including high stocks at home and an increase in imports of stainless finished goods from the Far East where price levels are well below the European and US markets.

At the time of writing this report, **commodity prices are still riding high in most instances**. Availability of stainless steel scrap was supported by nickel prices trading above US\$ 20,000 per tonne in the latter weeks of 2021. And high, if



**Joost van Kleef**  
 ORYX Stainless BV (NLD)  
 Chairman Stainless Steel &  
 Special Alloys Committee

“While high nickel prices boost stainless steel scrap values, this is a double-edged sword for our sector.”

volatile, nickel prices seem set to remain a reality for the foreseeable future: at our webinar last May, it was explained by guest speakers Olivier Masson of Roskill and Alina Racu of Nornickel that the stainless steel industry was likely to remain the leading nickel outlet but that units of the same metal required for electric vehicle battery production would surge by a factor of four or five in the years to 2030, thus fuelling swings in the nickel price.

According to the IMF, a typical electric vehicle battery pack needs some 35 kg of nickel and so climate change goals, among other factors, imply “soaring” demand between now and 2030. During this period, it says, **nickel consumption could potentially quadruple** while its price could rise “several hundred percent from 2020 levels”.

While high nickel prices boost stainless steel scrap values, this is a double-edged sword for our sector: although recyclers’ revenues are increased, money tied up in stock and cash-flow issues become a bigger factor in our daily business lives. Add in **elevated energy and transportation costs** and it becomes apparent that, while positive in many ways, 2021 was not a straightforward year. The same applied in related fields too: as explained by guest speaker Rosie Hill of leading superalloys

producer Ireland Alloys at our November webinar, challenges that confronted her business last year ranged from labour and container shortages to higher freight costs and the lack of clarity surrounding China’s customs reclassifications.

The final point underlines the **negative impact of assorted border rules and regulations on the free movement of our highly valuable raw materials**. The most worrying prospect imaginable is that the European Commission’s proposal to amend the EU waste shipment regulation will hold sway. As argued by Sean Davidson of the Davis Index, also a guest speaker last November, it is nothing short of nonsensical for politicians to talk about cutting carbon emissions and for them then to propose export policies that would serve only to reduce recycling rates.

## Key Facts

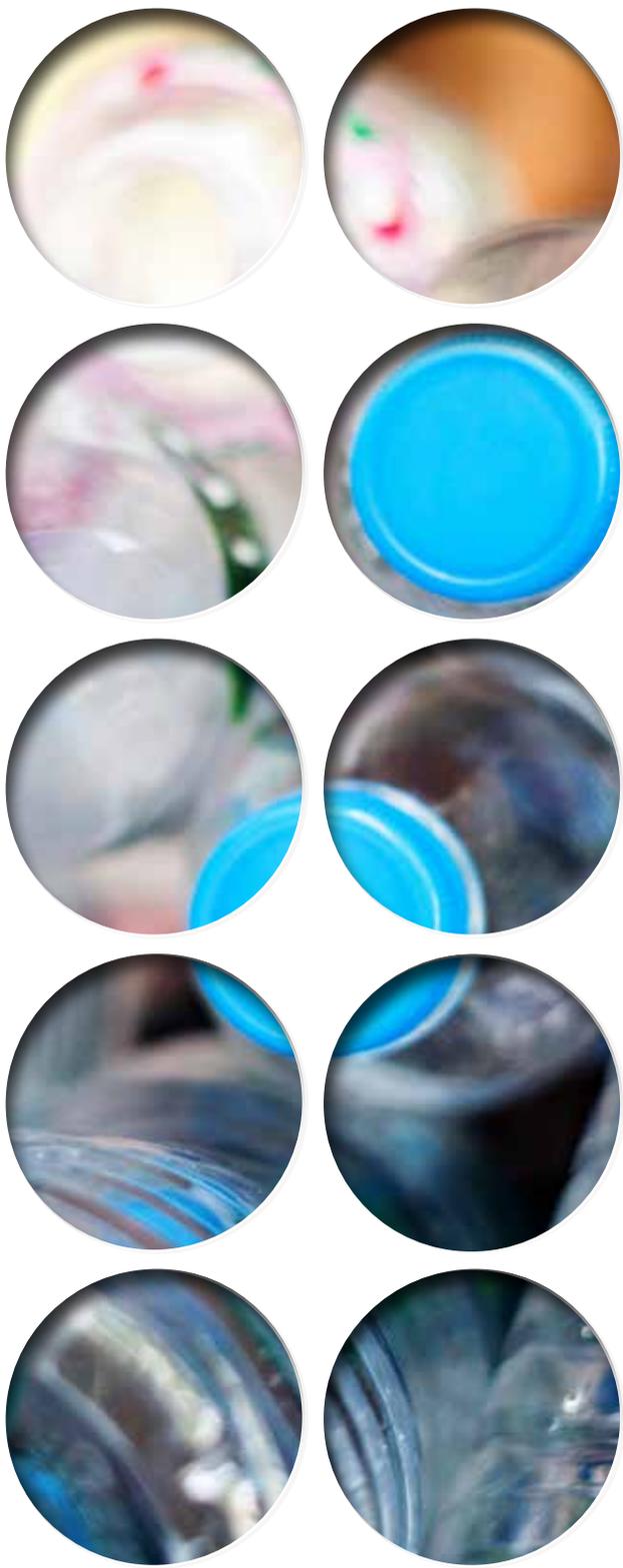
### Volatile nickel prices (LME cash)

Below US\$ **16,000** per tonne in late March 2021

and above US\$ **21,000** in late November, with a dip below US\$ 18,000 in early October

### Stainless steel melt shop production [million tonnes]

2020	<b>50.9</b>	
2021	<b>56.3</b>	+10.6%



# PLASTICS COMMITTEE

Global consumption of plastics is continuing to soar – and with it the need for an ever more efficient and well-supported recycling infrastructure. The world economy posted robust growth of 5.5% in 2021, with further significant gains of 4% anticipated for 2022 and 3.5% for 2023. Plastics has been among the many beneficiaries, supporting predictions that the world will consume 620 million tons by 2025, 832 million tons by 2040 and even 1.23 billion tons by this century’s mid-point.

Alongside this steep growth trend, we are also witnessing what analysts believe are only the beginnings of a [step-change in demand for recycled plastics](#). Statista, for example, forecasts that the market value of global plastic recycling will increase by more than US\$ 25 billion to an estimated US\$ 60 billion in the eight years to 2027.

A major factor in this [recycled plastics revolution](#) has been the decision by an increasing number of major brands to switch to [circular business models](#). During last May’s BIR Plastics Committee webinar, for example, guest speaker Eelco Smit explained that Dutch-based multi-national Philips had set targets for 2025 of securing 25% of its revenues from circular products, services and solutions, and of quadrupling its annual use of recycled plastic. Already, 95% post-consumer polypropylene content had been incorporated into vacuum cleaner housings and more than 75% recycled plastics into the non-food-contact parts of an award-winning coffee-maker, he told us.

But despite this tectonic shift in attitudes towards recycled plastics use, 2021 brought familiar challenges in terms of the wider perception of what we do and of its importance to the environment, typified by some [detrimental comments from highly influential sources](#) who should either be better informed or express themselves more clearly.

Speaking in October ahead of the COP-26 climate change summit in Glasgow and therefore at a time when environmental issues were attracting maximum public attention, UK Prime Minister Boris Johnson assured a group of schoolchildren that recycling “doesn’t work” and constitutes nothing more than “a red herring”. Fortunately, a number of experts rallied to rebut his comments, including UK anti-waste charity WRAP which not only described Mr Johnson’s observations as “unhelpful” but also hailed [recycling as “a critical part of tackling climate change”](#), adding that it takes 75% less energy to produce a plastic bottle made from recycled content compared to new plastic.



**Henk Alsema**  
*Vita Plastics (NDL)*  
Chairman Plastics  
Committee

We can only hope that these calmer and more considered voices are the ones that prevail in the public mind.

The real truth is that, in a significant number of ways, **plastics recycling has never worked better**. In many parts of the world, we are now seeing much more recycling taking place closer to source as well as a **definitive disconnect between primary and recycled plastic values that will continue to spur recycling activity and investment**. At the BIR Plastics Committee’s webinar in November last year, Mark Victory of market intelligence provider ICIS argued that, across the plastics spectrum, virgin values were no longer acting as a price cap on recycled prices because of the willingness of brand owners to pay more for the latter in order to meet their **sustainability targets**. Indeed, many of these targets are now exceeding regulatory requirements because of the scale of consumer pressure to **incorporate recycled content in their products**.

The general circulation of ill-informed or poorly-worded comments about plastics recycling is not the only challenge facing our industry at present. We can also point to a **lack of both feedstock and labour**, and to the substantial volumes lost to incineration through the **insufficient attention paid to design for recycling**.

And as emphasized during both our webinars last year, moving our materials remains fraught with difficulties: global freight rates have soared to punishingly high levels amid disruption and shortages, while inland trucking is also suffering many problems, including a lack of drivers owing to the impact of COVID.

But despite all these obstacles, 2021 will enter history as a truly amazing and groundbreaking year. **The course of plastics recycling has changed irrevocably**, and almost certainly for the better.

“A major factor in this recycled plastics revolution has been the decision by an increasing number of major brands to switch to circular business models.”

## Key Facts

### Global plastic consumption forecasts:

2025	<b>620</b> million tons
2040	<b>832</b> million tons
2050	<b>1.23</b> billion tons

### Market value of global plastics recycling:

To increase by more than

**US\$ 25 billion**  
to an estimated

**US\$ 60 billion**

in the eight years to 2027\*

\*Source: Statista

“Despite the tremendous gains made over recent decades in terms of devising tyre/rubber recycling solutions and despite the positive shift in attitudes towards recycled materials, there are inevitable speed bumps along the road to continued progress.”

## TYRES & RUBBER COMMITTEE

While we are all delighted at the prospect of a return to face-to-face BIR Conventions in 2022, our webinars over the last two years have proved invaluable in highlighting the wealth of innovation within the tyre and rubber recycling sector.

We have learned about Michelin’s BlackCycle project which has set itself the ambitious target of **recycling almost 50% of Europe’s end-of-life tyres (ELTs)** into new tyres just a handful of years from now, and about that growing band of businesses around the world which are successfully developing markets for various forms of non-ELT rubber scrap.

These developments have become even more important given the threat hanging over the crumb rubber infill market which, for many years, has absorbed a **large proportion of the used tyres coming forward for recycling**. Indeed,

latest figures from the European Tyre and Rubber Manufacturers’ Association (ETRMA) covering 32 countries show that, of the 1.95 million tonnes of ELTs treated for material recovery in 2019, 1.36 million tonnes (or almost 70%) ended up in granulation processes.

Recycled rubber uptake has been boosted by the ever-growing number of brands which are looking to **increase the recycled content of their new products in line with corporate environmental targets**. This trend is certain to continue: for many companies in Europe and North America,

### Key Facts

End-of-life tyre recycling in Europe\*

Collection and treatment rate = **95%**

**55% => material recovery**  
of which

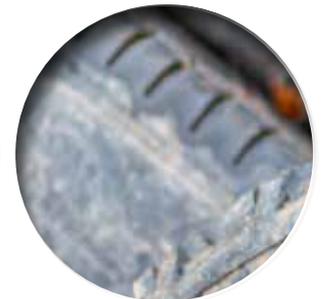
**69%** => granulation processes

**24%** => incorporated in cement

**6%** => civil engineering applications

**40%** => energy recovery

*\*Latest ETRMA data for 32 European countries*



environmental pressures have been trumping cost considerations for some time but, as we heard at the BIR Tyres & Rubber Committee webinar last May, **the ecological imperative is now gaining traction** further east too: Asmipudin Mohd Ali Jinnah of Malaysia-based Bridge Fields Resources told us that some Asian manufacturers are already willing to pay more for secondary raw materials so that they can put “recycled” on their product labelling; and fellow contributor Harsh Gandhi of major Indian tyre recycler GRP Ltd pointed to evidence of consumers allowing their suppliers more flexibility over recycled contents.

Our webinar in November last year offered a similarly positive perspective on recycled carbon black (RCB), with Germano Carreira of BB&G-Alternative Worldwide Environmental Solutions assuring us of the scope in the near future for RCB prices to exceed those of virgin carbon black in certain applications.

As in the plastics sector, therefore, we are seeing **emerging potential for a permanent disconnect between recycled and primary prices**, based ultimately on consumer pressure for more environmentally sensitive product manufacture. But as has been stressed by our regular webinar contributor Martin von Wolfersdorff of Wolfersdorff Consulting, success is still dependent on application performance and on

how much recycled content can be incorporated into a new product without loss of key properties.

Despite the tremendous gains made over recent decades in terms of devising tyre/rubber recycling solutions and despite the positive shift in attitudes towards recycled materials, there are **inevitable speed bumps along the road to continued progress**. While the last couple of years have been unusual in many ways because of COVID, one constant has been the flow of retrograde legislation that has the potential to hinder the development and flourishing of recycling activities, including **shipment regulations which inhibit cross-border movements of crucial secondary raw materials**.

One solution for our sector could well lie in **agreeing harmonized end-of-waste criteria for rubber derived from ELTs**. Interested parties in several European countries have already pushed at the national level for firm criteria to identify the point at which tyre-derived rubber ceases to be waste and is categorized

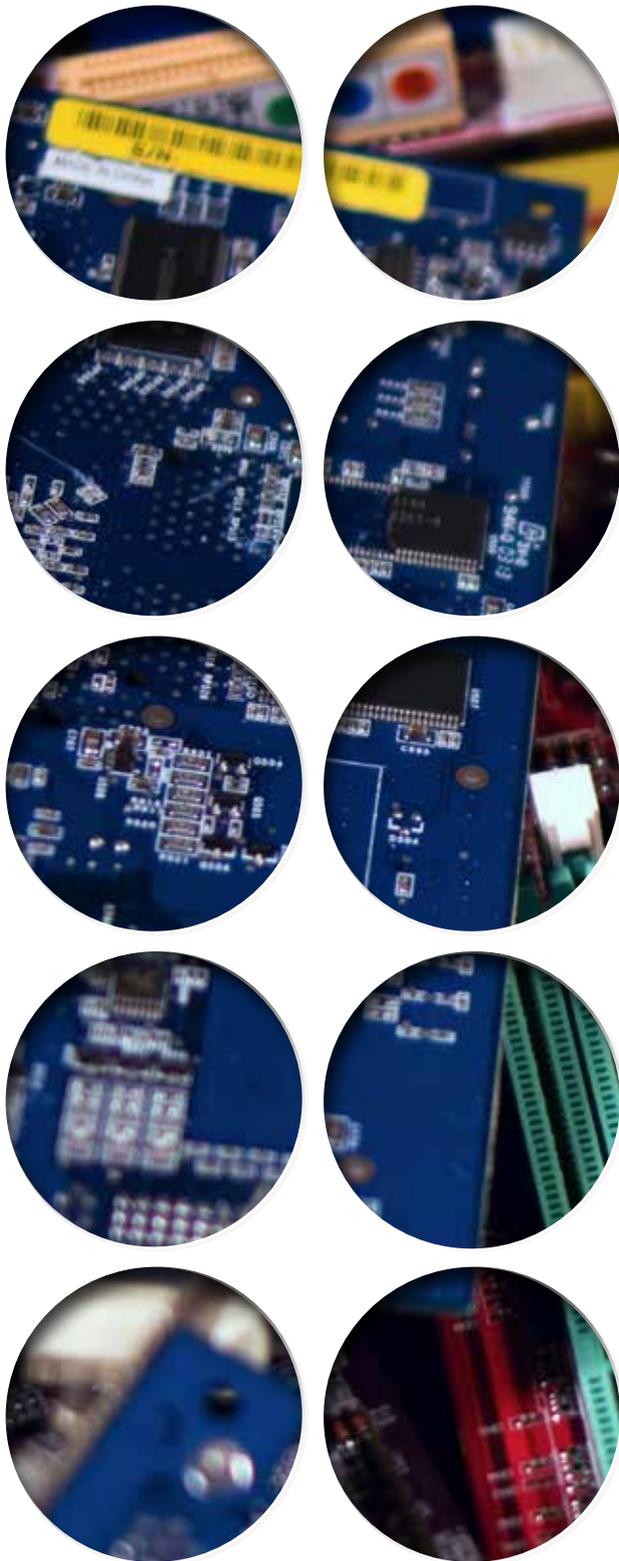


**Max Craipeau**  
*Greencore Resources (CHN)*  
Chairman Tyres & Rubber  
Committee

instead as a material. But as noted last October in a joint statement from the ETRMA and the European Recycling Industries' Confederation, “a common starting point” for end-of-waste is essential to foster the circular economy and to **increase the uptake of ELT-derived rubber in high-value end-use markets**.

Meanwhile, our own Tyres & Rubber Committee, in conjunction with BIR, has sought to progress a dialogue at EU level aimed at **introducing minimum recycled contents in rubber products**. The possibilities must surely be worth pursuing given that I have seen with my own eyes how well this approach has worked for plastics.

Only through such innovative and unified approaches to demand-pull and control mechanisms will we create a sustainable global structure that extracts maximum benefit from recycling.



## E-SCRAP COMMITTEE

Although not to the same extent as in 2020, last year saw restrictions imposed at various times around the world in a bid to control the spread of Coronavirus, including directives from a number of governments that people should work from home whenever feasible. Thus, the pandemic continued to be responsible in significant measure for an increase in demand for electronics and, as a consequence, for a spurt in such equipment being returned for reuse or recycling.

This increase has come on top of the underlying uptrend in electronics demand. According to Statista, consumer spending on traditional and emerging technologies will exceed US\$ 505 billion this year compared to US\$ 422 billion in 2019, the year before the pandemic became a factor in most aspects of our lives.

Similarly, it has been estimated that WEEE amounted to around 57 million tonnes worldwide in 2021 and that subsequent growth will be at around 2 million tonnes per year. The most recent Global E-waste Monitor, dated 2020, projected that the volume of discarded products with a battery or plug such as computers and mobile phones will reach 74.7 million tonnes by 2030 – or almost twice the 2014 figure – thanks to higher electric and electronic equipment consumption rates, shorter lifecycles and limited repair options.

However, a competing force emerged in 2021 in the form of unprecedented disruption to global supply chains,

again traceable to the pandemic. Of particular relevance to our sector, the global shortage of semiconductors had a critically adverse effect on producers' abilities to finalize their products, resulting in lower consumption and thus reduced flows of WEEE into the reuse and recycling orbit.

The impact of wider events on our sector has also been illustrated by greater efforts among brand owners to enhance their environmental credentials under pressure from ever more environmentally aware consumers. The impetus among product manufacturers to reduce their carbon footprint has strengthened demand for secondary raw materials and significantly improved our price levels.

As we learned from Scott Newell III at our E-Scrap Committee webinar in November, high non-ferrous metals prices and increased quality requirements on imports has led to substantial investment in additional separation equipment; and fellow guest contributor Max Craipeau

pointed out that many scrap plastics captured from WEEE are now selling at a premium to their virgin counterparts.

But while pro-environment factors are certainly helping to support our industry's activities, the same cannot be said for the **constraints imposed by many forms of transboundary shipment legislation**. In this context, it was of particular concern towards the end of 2021 when the European Commission came forward with a proposal to revise the EU Waste Shipment Regulation in a way that would restrict movements of our industry's materials, thereby driving down prices and undermining collection activity.

While it is good to know that BIR can now plan with greater confidence for face-to-face Conventions in 2022, our webinars in 2021 were still extremely useful in that they enabled us to press the pause button on our normal working lives and to use the time-out to assess where we stand as an industry and in what direction we might be heading in future. At our May event, we had further confirmation of the **ever-changing nature of e-scrap**, with the average plastics share of electronic goods said to have jumped from below 20% in 2013 to nearer 30% a mere seven years later, thus **requiring recycling processes to become yet more sophisticated**.



**Dr Helmut Kolba**  
*Remondis Electrorecycling GmbH (DEU)*  
Chairman E-Scrap Committee

In addition, guest contributor Klaus Hieronymi of the European Recycling Platform foresaw the possibility that initiatives such as the European Green Deal could lead to existing business models giving way to an **extended circular economy built around repair, reuse and remanufacturing**.

Also looking ahead, fellow guest Marc Affüpper of TSR Recycling GmbH & Co. KG identified the need for greater recognition of the recycling sector's sustainability credentials; for more partnerships between the raw materials industry, manufacturers and recyclers; and also, crucially, for a more level regulatory playing field. Sad to say that this final need may prove to be little more than wishful thinking given the **vast array of differing legislative approaches around the world**.

"The impetus among product manufacturers to reduce their carbon footprint has strengthened demand for secondary raw materials and significantly improved our price levels."

## Key Facts

Global WEEE generation in 2021:

Around **57** million tonnes

Global WEEE forecast for 2030:

**74.7** million tonnes

“The circular economy exists at a world level, and therefore the resources must go where they are wanted for industrial purposes.”



## INTERNATIONAL ENVIRONMENT COUNCIL

**Given that free trade is one of BIR's fundamental principles, we must begin our review of 2021 with the piling high of border walls against our industry's materials. If regulation was an Olympic event, the EU would undoubtedly win the gold medal. It would not be so bad if the consequences of this regulatory zeal were limited to the EU alone; however, the EU's actions have worldwide ramifications.**

In November last year, the European Commission released its proposed recast of the Waste Shipment Regulation aimed at drastically cutting movements of “waste” beyond the EU, if not at a full export ban. Backed by the plastic-bashing storm, **all materials are affected** and all political forces are throwing their full support behind keeping the resources within the EU even if there is not the industrial capacity to absorb them. This ignores the fact that the **circular economy exists at a world level**, and therefore the resources must go where they are wanted for industrial purposes. This type of administrative meddling will never deliver positive results; instead, it will provoke only anger among those importing countries whose development will be hindered by such a regulation, fuelling a vicious circle of retaliation.

So let's move on to the topic of decarbonization. If we listen to the politicians and to the media, “old” industries should be erased and new “zero emission” industries should be allowed to

take their place. But look at the facts: we spent two centuries building the industries we have now and used billions of tons of coal and petroleum to achieve that. Do these politicians and media people have a magic wand? What we can observe at present is, on the one hand, a **reduced energy offer with dramatic economic consequences** and, on the other, the launch of multi-trillion-dollar rescue and recovery plans. The highly questionable thinking by some is that CO<sub>2</sub> emissions will decrease if energy becomes scarcer. This is true, but will “degrowth” be able to do the same job as these rescue/recovery plans? Certainly not. And will degrowth help us to build a new “zero emission” industry structure? Again, certainly not.

Even if we presume that these “new” industries will have lower carbon emissions than their predecessors, it is clear that **global scenarios underestimate the future rate of growth in energy demand**. It has been calculated, for example, that digital technology already consumes 10 to 15% of the world's

electricity and this consumption is doubling every four years. Global energy demand is growing far faster than production: even the growth in the output of renewable energy is not matching the growth in world electricity demand, not to mention other energy needs as electricity accounts for only 20% of total consumption.

What are the implications for the recycling industry? **We are raw material producers** and so, at first glance, all the rescue and recovery plans that have been announced – such as the huge US\$ 1.2 trillion package for infrastructure renewal in America – appear to suggest a fantastic outlook over many coming years for steel and other metals, thus supporting our **key metal recycling sector**. But in order to build, one needs energy; and yet in parallel, we see countries and major banks retreating from support of petroleum and gas exploration. Everybody knows that **the slightest gap between supply and demand will lead to skyrocketing energy prices**, and yet to build also needs time. An instant ban on oil and gas is easy demagoguery whereas building takes years. If this Great Energy Reset leads to a Great Energy Collapse, then the raw material equation will certainly be completely altered.



**Olivier François**  
Galoo Group (FRA/BEL)  
Chairman International  
Environment Council

There will be no energy transition without the availability of a huge quantity of cheap energy, and this should be the highest priority for all governments. The first consequence of this will be **growth in the consumption of recycled material** and a prospering of the circular economy. Our recycling associations and federations around the world – be they national or supranational – must hammer home this order of priority at every available opportunity.



“It appears there is a never-ending saga of, and regrettably an onslaught through regulations that addresses our industry.”

## INTERNATIONAL TRADE COUNCIL

While the popular narrative at the mainstream level rightfully celebrates the vital and increasingly essential role and contribution to the circular green economy and the environment made by our members in the recycling industry, at the practical level 2021 has seen a swathe of new and emerging threats to our sector in the forms of newly promulgated and mandated misguided regulatory controls, which provide a litany of unprecedented existential challenges to our members in their vital role in performance of the global recycling supply chain and the free movement of these essential raw materials.

The primary role of BIR's International Trade Council (ITC) is dedicated to constantly ensuring identifying, monitoring and advocacy in respect of these challenges to our membership and the global recycling industry in general. The year 2021 has indeed underscored to an unparalleled extent the necessity of these functions and the **relevance of BIR as the global voice of the recycling industry.**

Working in tandem with our worldwide national association members, we have faced up to and advocated for our industry's input and positions on a plethora of both implemented and embryonic directives including – but not limited to – those in China, the EU, Malaysia and Indonesia. It appears there is a never-ending saga of, and regrettably an onslaught through regulations that addresses our industry.

The spectre of these fresh emerging challenges to our primary **commitment to free trade** will remain an ongoing priority of the ITC, supported by the consummate diligence and professionalism of our Brussels Secretariat particularly with the invaluable role of Ross Bartley as our Director of Trade and Environment and his unrivalled expertise through **detail, data and dialogue.**

Given the increasingly vital role of informative and positive messaging in protection and pursuit of our goals, the landmark focus of our latest innovation, the bi-monthly virtual show developed and broadcast under the auspices of the ITC in collaboration with the BIR Communications Committee, “The Challenge”, has proved an **unrivalled, exciting and increasingly celebrated innovation.**

S ...

### “The Challenge”

11 March 2021 at 10.00 CET



**Matthew Chamberlain**  
CEO, London Metal Exchange

*in conversation with our resident team on the topic:*

### “Ringing the Change”



**Mark Sellier**  
Global Metals Network (GMN)



**Murat Bayraktar**  
EMR (DEU)



The Challenge, hosted by myself as Chairman of the ITC along with our two resident co-anchor contributors, Mark Sellier (Communications Committee Chair), and Murat Bayram (Convention Committee Chair), along with a **wide range of high-level invited guests** on the programme editions, has become a signature series of events, being both front and centre not only with its bi-monthly broadcasts, but also via its marquee role at both our virtual and live convention editions.

The purpose of The Challenge is to provide in an informal TV chat show format a review, information proliferation process and discussion on the most pressing, immediate and crucial issues confronting our members across our full range of cross-commodity raw material, **addressing the needs for our members of greater topical understanding of issues, actions and possible solutions.**

The first year of The Challenge editions has covered the full panoply of demanding issues facing our members. Our "The Challenge" Team of The Three Amigos has both commented on and discussed with a diverse range of guests including the CEO of The London Metal Exchange, leadership figures from the logistics sector and national/regional associations, leading industry players, and journalists from the industry media to name but a few. Crucial current



**Michael Lion**  
*Everwell Resources Ltd (CHN)*  
Chairman International Trade Council

topics included the **impact of LME contractual changes impacting our members** hedging opportunities with cash flow and risk management implications; the global container and logistics hiatus; regulatory demands and industry advocacy issues; messaging of our industry's role and concerns; thereby providing a blend and format that has understandably justified the effusive welcome this programme has achieved.

To ensure the widest coverage, influence and reach not only to our membership but to all stakeholders with whom they are involved and engaged, **The Challenge is provided with free access to all to view** and be fully aware of our vital messaging.

That the year 2022 will provide issues to confront BIR and its ITC seems undoubted and it will be there up to, for and including with The Challenge.



**"The Challenge"**

**webinar series**

**First class speakers, key topics,  
always relevant!**







## SPECIAL COMMITTEES

The BIR Special Committees deal with organisational and administrative matters concerning the general structure of the organisation.





**Murat Bayram**

*European Metal Recycling Ltd (GBR)*

Chairman Convention Committee

## CONVENTION COMMITTEE

You may well have been in this situation: you are running down the station steps and see your train is about to leave, so you rush over to it and get in the nearest carriage just a split second before the doors close. It felt something like that when we met late last October for what proved to be a very successful BIR Global eForum in Brussels. If the conference had been scheduled to take place just a few weeks earlier or only a handful of days later, then it would probably have been cancelled.

The constant vigilance required in these COVID-hit times with regard to whether, how, where and when a BIR event can take place is incredibly exhausting. So I am all the more grateful to be able to work with such a **fantastic and positive-thinking team**. Nearly 500 participants – representing 295 companies from a total of 41 countries – converged on the Belgian capital to illustrate yet again just **how important face-to-face meetings are**. These gatherings simply cannot be replaced by any computer screen in the world.

It is these people who travel extensively to check on possible Convention venue hotels for the worldwide recycling industry. It is they who negotiate a contract without knowing whether the country in question will change its COVID rules at the very last minute. And it is this same band of extraordinarily dedicated folk who get asked so many questions, the answers to which, on occasions, no-one can possibly know. I would therefore like to thank this amazing BIR team who, yet again, made the impossible possible.

Their skills, resilience and flexibility were not exhibited solely in relation to the Brussels event in November. Six months earlier, when we realized that an in-person event was not going to be possible, we wanted to come up with something special to take its place. **Challenges are often a starting point for creativity** and this is what the BIR team focused on, ultimately leading to the development of a brand-new BIR Convention platform on which to host an **innovative TV-style format with a rapid succession of different online features**. With the collaboration of all the BIR Divisions and Committees, our sponsors and those members who accepted the invitation to take part in this ambitious project, **we succeeded in producing 37 sessions** – including hot-topic plenary sessions and lively panel discussions as well as on-demand news, interviews, market reports and company videos, which together provided **a galaxy of informative and entertaining content**.



“Nearly 500 participants – representing 295 companies from a total of 41 countries – converged on the Belgian capital to illustrate yet again just how important face-to-face meetings are.”

Our main goal during the pandemic has always been to [continue to supply BIR members and the wider recycling industry with the information and networking opportunities](#) that you would usually find at a BIR Convention, whether it be a virtual or an in-person event.

In hoping that 2022 will see more normal conditions prevailing around the world, we have chosen two wonderful cities in which to meet again and exchange ideas. [BIR Conventions are for finding solutions](#) or for arriving at the best business decisions in what is an increasingly complex world. Barcelona awaits us in May, with many issues confronting our industry that need to be resolved. And then in October, we will be returning to Dubai for our get-together.

You can rest assured the BIR team will do everything in its power to ensure that both these Conventions *are a resounding success. In the meantime, stay safe.*



“To keep social media activity flowing and alive, everybody needs to participate. Therefore, please support our efforts to widen our social media audience by following, liking, commenting on or tagging us @BIRworld or #BIRWorld.”

## COMMUNICATIONS COMMITTEE

The pandemic continued to restrict business travel and therefore physical meetings throughout 2021 and so, in response, BIR maintained the emphasis on the regular, clear and trustworthy communication of industry-relevant developments and topics via its established online channels.

At the beginning of the year, the Communications team conceived and produced a new, regular and ground-breaking live video broadcast entitled “The Challenge”. The format of the show – led by ITC Chairman Michael Lion as its host and supported by Murat Bayram and myself – consists of live discussions with internal as well as external guests and is aired every two months, with additional episodes as part of the online BIR event programme where appropriate. As part of this same series, my colleagues and I aim to explore industry-wide issues related to all sectors of recycling.

In total, five episodes of “The Challenge” were produced and aired, including a hybrid discussion that took place on stage during BIR’s live networking event in Brussels last October, with me contributing via video link from Hong Kong. In addition to providing our members with crucial, up-to-the-minute information and the expert perspectives of experienced industry participants, “The Challenge” provides content that is posted on LinkedIn and Twitter, thus keeping BIR at the head of the global recycling conversation.

In 2021, we covered and continued to monitor a wide variety of topics, including but not limited to: the implementation of Chinese import regulations and their practical operation; proposed changes at the London Metal Exchange; the global container crisis; regulations and protectionism, including export restrictions in the EU; and entrepreneurialism and industry opportunities.

During the course of 2021, BIR’s Communications team continued to grow the association’s profile on LinkedIn where we have doubled the number of followers when compared to 2020; on this channel, we average around 15 posts per month. On Twitter, we have close to 2000 followers and average 16 tweets a month, with most of the activity surrounding our online events and in-person conventions.





**Mark Sellier**  
Global Metals Network  
Limited (CHN)  
Chairman Communications  
Committee

To keep social media activity flowing and alive, **everybody needs to participate**. Therefore, please support our efforts to widen our social media audience by following, liking, commenting on or tagging us [@BIRworld](#) or [#BIRWorld](#).

With regard to our conventions, the Communications team contributed massively to the format, content, visual identity and **promotion of the two events organized in 2021**. After the fully online Convention in May, BIR's networking event in Brussels last October was highly significant as it was our **first face-to-face gathering in two years**. This was followed in November by the Global eForum series of online webinars covering all our commodity divisions and committees, as well as the BIR's International Environment Council. A considerable amount of pre- and post-event communication material was produced, including videos, press releases, news items and proceedings.

We continue to devise and release **a range of important publications** such as those comprising our global ferrous and paper statistics, our world organization's Annual Report, the BIR Membership Directory, a host of World Mirrors covering the key issues affecting our main commodities, and our monthly eBrief newsletter highlighting latest legislative and policy developments around the world.

Work on our website is ongoing: recently, we have focused in particular on the Members area so as to provide **increased and improved content** which is available only to our paying members. Also during the course of 2021, we prepared and issued 39 press releases and posted over 120 news items on the BIR website, thus keeping the trade and general media informed not only about **global developments affecting the recycling industry** but also about BIR's initiatives aimed at safeguarding the interests of our sector.

As Chairman of the Communications Committee, I am extremely grateful for the **dedication and professionalism embodied in the communications output** from our secretariat, led by Communications Director Elisabeth Christ and ably supported by Michèle Noukam. My thanks also go to Director General Arnaud Brunet and to the other members of the secretariat for their input and support with this vital portfolio.



# MEMBERSHIP COMMITTEE

**2021 began with a better business momentum when taking into consideration the pandemic-related difficulties and challenges we had all experienced in the previous year.**

As you go through this BIR Annual Report, you will read that **business conditions have generally improved for the recycling industry** and that demand has picked up for most recyclables worldwide. All industries needed to rebuild their inventories and so actively looked to buy all commodities, including recyclables. This led to a sharp increase in prices, as well as to a leap in freight costs to unprecedented levels. Indeed, the bill for shipping recyclable materials from point A to point B has tripled or even quadrupled in some cases.

Throughout the course of last year, **we at BIR did our best to extend the best of services to our members.** We managed to organize a virtual Convention in May last year as well as a highly-praised Global Trading Forum in Brussels last October at which our members had the opportunity to meet face to face for the first time in two years. This gathering was a success in all respects and has shown that **our members are loyal to their organization** and are willing to abide by all the safety protocols if it means they can move forward towards regaining their normal lives.

In addition to these great networking opportunities, BIR continued to provide **market intelligence and legislative updates** for the benefit of its members. The monitoring of international legislation that is likely to impact on your businesses and the up-to-date market information contained in our World Mirrors and our Global Facts and Figures publications are just some examples of the inestimable value that membership of our world organization offers you.

By the end of 2021, the Omicron variant of COVID was spreading quickly around the globe. Fears of a return to lockdowns or other severe restrictions raised their head again in many countries around the world, with official New Year celebrations either more limited or cancelled in many cities.

Despite the pandemic and its ramifications, we are happy to report that **BIR had managed to keep a relatively stable membership count** of 700-plus by the end of last year, illustrating once more that all BIR members are committed to their organization and have responded in huge numbers to the call to renew their membership despite all the financial

“BIR members are committed to their organization and have responded in huge numbers to the call to renew their membership despite all the financial difficulties that they have had to endure during the two years of the pandemic.”



**Fadi Shahrouh**

*Sharmetal Trading CO.  
SARL (LBN)*

Chairman Membership  
Committee

difficulties that they have had to endure during the two years of the pandemic.

At this moment, BIR is represented in some 70 countries around the world and, even during these challenging times, has succeeded in attracting new members from different regions. BIR membership has always been seen as an added value for the companies working in the recycling industry since our world organization operates to a strict Code of Conduct and carefully selects its members after exhaustive checks on new applicants to make sure they match our qualification requirements. This approach is key to maintaining the quality of members and to creating a safe environment for trade among them.

Lastly, don't ever forget that you are BIR! We still need you and your support more than ever before. Therefore, please renew your membership now if you have not done so; and a big thank-you to all those who have signed up already.

Let's all look forward to better times in 2022 and to an end to all the restrictions that this virus has placed on our daily lives.



## BIR MEMBERS SITUATION

Which countries are in the Top 10?

Countries	Gold	Ordinary Gr
Germany	42	30
United States	42	22
United Kingdom	32	26
Spain	16	32
Italy	18	22
Netherlands	20	15
India	23	11
United Arab Emirates	26	7
France	16	15
Belgium	8	16

# AMBASSADORS COMMITTEE

**As I write this report, I believe we should be very thankful if we are among those fortunate people whose loved ones have survived the pandemic. We should also be glad that an end is seemingly in sight to the disruption the virus has brought to our everyday lives.**

BIR has successfully manoeuvred its way through these difficult COVID times. Our world organization has overcome the distance barriers and has reached out to all members through their screens at home or in the office, continuing to provide them with the up-to-date information that has helped them to navigate the many hardships of the pandemic. BIR has managed its way out of the Coronavirus bottleneck, to the point of resuming a level of physical Convention activity in October last year.

During these tough times, our Ambassadors have been operating around the clock to promote BIR through various forms of representation, including introducing new members and also keeping in close touch with existing members who may have overlooked their membership renewals, as well as with some businesses so badly affected by the pandemic that they had been prevented from renewing their membership.

Despite the unprecedented challenges resulting from COVID, BIR has not only maintained its services but also gone the extra mile to improve on them.

The Middle East region was blessed with increased conference activity in 2021 and I personally represented BIR at the following events: the 9th MENA Billet and Flats Conference last March; the Middle East Energy online conference in June; the Middle East and Iron Steel Conference in early December; and later that same month, the virtual 10th Asian Metallurgy Seminar.

During my participation as a speaker, I was able to promote BIR as the world recycling federation, as the lead organization for an industry which has been a major contributor over many generations to decarbonization and as a driving force behind the push towards a global circular economy, serving as a backbone to the world economy and as a key component of all industrial segments. As a result of my participation in these events, some delegates were introduced to BIR as prospective members.

As a national association member of our world organization, the Bureau of Middle East Recycling hosted BIR President Tom Bird at our 9th International BMR Conference in Dubai last November, at which he was the main guest speaker.

“In their specific countries and regions, our Ambassadors have done – and are continuing to do – excellent work in sharing information about key local developments throughout the pandemic, thereby promoting awareness of the services provided by BIR.”

As for other examples of the positive work undertaken by our Committee, our Hong Kong Ambassador Christin Chow succeeded in introducing a number of new members to BIR while UK Ambassador Susie Burrage of the British Metals Recycling Association not only introduced new members but also continued her valuable work in promoting our world federation through social media.

In their specific countries and regions, our Ambassadors have done – and are continuing to do – excellent work in sharing information about key local developments throughout the pandemic, thereby promoting awareness of the services provided by BIR.

Working hand in hand with all the BIR committees, promoting the chosen venues for Conventions, communicating through social media and representing BIR at various conferences in different regions of the world – these were the major priorities for our Ambassadors in 2021.

Looking ahead, and liaising closely with our BIR President, we will continue to stand together in the knowledge that the work done by the recycling industry on behalf of the environment is truly fulfilling the goals of a circular economy, of resource preservation, and of corporate and social responsibility.



**Salam Sharif**  
*Sharif Metals Group (ARE)*  
Chairman Ambassadors  
Committee

I would like to thank everyone for their support of BIR and hope you will all continue to make a difference both for our world association and for our industry as a whole. I am looking forward to seeing you all in May this year at our Convention in Barcelona and then again in October when Dubai is set to play host to a BIR Convention for the third time since 2009.

Until we meet again soon, I wish health, wealth and a shower of blessings on you, your families and your loved ones.



# SPEAKERS AT BIR EVENTS IN 2021

Online BIR World Recycling Convention & Exhibition, 31 May – 2 June 2021

## Opening address

- **Tom Bird**, BIR President

## The Challenge – Special Convention Edition

- **Michael Lion**, Everwell Resources Ltd (CHN)
- **Mark Sellier**, Global Metals Network Limited (CHN)
- **Murat Bayram**, EMR – European Metal Recycling Ltd (GBR)
- **Emmanuel Katrakis**, EuRIC (EU)
- **Adina Renee Adler**, ISRI (USA)
- **Andrew Hoad**, DP World (CHN)

## International Environment Council

- **Olivier François**, Galloo (BEL/FRA)
- **Ross Bartley**, BIR
- **Julia Blee**, EuRIC (EU)
- **Aurelio Braconi**, EUROFER (EU)

## Ferrous Division

- **Greg Schnitzer**, Sims Metal Management Global Trade Corporation (USA)
- **Lee Allen**, Fastmarkets Ltd (GBR)
- **Jack Lim**, Zhejiang Metals and Material Co (CHN)
- **Denis Reuter**, TSR Recycling GmbH & Co KG (DEU)
- **Tom Knippel**, SA Recycling (USA)
- **Rolf Willeke**, BIR (DEU)
- **Daniela Entzian**, BIR (DEU)

## Shredder Committee

- **Alton Scott Newell III**, Newell Recycling Equipment (USA)
- **Chris Bedell**, The David J. Joseph Company (USA)
- **Frederik Thoma**, Keller Lufttechnik Benelux (BEL)
- **Martin Dörner**, Ventilatorenfabrik Oelde GmbH (DEU)
- **Ross Bartley**, BIR

## E-Scrap Committee

- **Helmut Kolba**, Remondis Electrorecycling GmbH (DEU)
- **Marc Affüpper**, TSR Recycling GmbH & Co KG (DEU)
- **Klaus Hieronimy**, European Recycling Platform (ERP) (EU)

## Keynote Session

- **Lucy Hawking**

## Stainless Steel & Special Alloys Committee

- **Joost van Kleef**, Oryx Stainless BV (NLD)
- **Alina Racu**, Nornickel – Metal Trade Overseas AG (CHE)
- **Olivier Masson**, Roskill Information Services (GBR)
- **Tobias Kämmer**, Oryx Stainless AG (NLD)

## Plastics Committee

- **Henk Alsema**, Vita Plastics (NLD)
- **Eelco Smit**, Philips (NLD)
- **Steve Wong**, Fukutomi Co Ltd/China Sustainable Plastics Association (CHN)
- **Max Craipeau**, Greencore Resources Ltd (CHN)
- **Theo van Ravesteyn**, MSC Mediterranean Shipping Company (NLD)
- **Sally Houghton**, Plastic Recycling Corporation of California – PRCC (USA)

## Tyres & Rubber Committee

- **Max Craipeau**, Greencore Resources Ltd (CHN)
- **Martin von Wolfersdorff**, Wolfersdorff Consulting (DEU)
- **Harsh Gandhi**, GRP Limited (IND)
- **Asmipudin Mohd Ali Jinnah**, Bridge Fields Resources Sdn Bhd (MYS)

## Textiles Division

- **Martin Böschen**, TEXAID TextilverwertungsAG (CHE)
- **Alan Wheeler**, Textile Recycling Association (GBR)
- **Emile Bruls**, Rijkswaterstaat – The Dutch Ministry of Water and Infrastructure (NLD)
- **Jonas Eder-Hansen**, Global Fashion Agenda (DNK)
- **David Watson**, Plan Miljø (DNK)

## Non-Ferrous Metals Division

- **David Chiao**, Uni-All Group Ltd (USA)
- **Eric Tan**, Malaysia Non-Ferrous Metals Association (MYS)
- **Paul Coyte**, Hayes Metals (NZL)
- **Dhawal Shah**, Metco Marketing (IND)
- **Murat Bayram**, EMR – European Metal Recycling Ltd (GBR)

## Paper Division

- **Jean-Luc Petithuguenin**, Paprec Recyclage (FRA)
- **Sébastien Ricard**, Paprec Recyclage (FRA)
- **Julia Blee**, EuRIC (EU)
- **Martin Palmer**, Stena Group (SWE)
- **Ranjit Baxi**, J&H Sales International LTD (GBR)
- **Francisco Donoso**, Alba Servicios Verdes (ESP)
- **Martin Soth**, Pieringer zužitkování odpadu s.r.o. (CZE)
- **Dominique Maguin**, La Compagnie des Matières Premières (FRA)

# CALENDAR OF FUTURE BIR CONVENTIONS

## BIR Global eForum 2021, 25-26 October & throughout November

### The Challenge – Special Convention Edition

- **Michael Lion**, Everwell Resources Ltd (CHN)
- **Mark Sellier**, Global Metals Network Limited (CHN)
- **Murat Bayram**, EMR – European Metal Recycling Ltd (GBR)
- **George Adams**, SA Recycling (USA)

### Non-Ferrous Metals Division

- **Dhawal Shah**, Metco Marketing (India) PVT LTD (IND)
- **Murat Bayram**, EMR – European Metal Recycling LTD (DEU)
- **Shen Dong**, Omnisource Corporation (USA)
- **Eric Tan Boon Hai**, Malaysia Non-Ferrous Metals Association (MYS)
- **Franco Dalpiaz**, Raffmetal Spa (ITA)
- **Natalia Zholud**, TRM Group (BLR)
- **José-Martin Neumann**, TSR Recycling GmbH & Co. Kg, Zentrale (DEU)

### E-Scrap Committee

- **Helmut Kolba**, Remondis Electrorecycling GmbH (DEU)
- **Henk Alsema**, Vita Plastics (NDL)
- **Alton Scott Newell III**, Newell Recycling Equipment (USA)
- **Tom Bird**, Chiho Environmental Group/Scholz Recycling GmbH (CHN/DEU)
- **Arnaud Brunet**, BIR
- **Max Craipeau**, Greencore Resources Limited (CHN)

### Ferrous Division

- **Greg Schnitzer**, Sims Metal Management Global Trade Corporation (USA)
- **Scott Newell**, Newell Recycling Equipment (USA)
- **Benedikt Zeumer**, McKinsey & Company (DEU)
- **Steven Vercammen**, McKinsey & Company (BEL)
- **Rolf Willeke**, BIR
- **Ted Taya**, Shinsei Scrap Co. Ltd (JPN)
- **Denis Reuter**, TSR Recycling GmbH & Co. Kg, Zentrale (DEU)
- **George Adams**, SA Recycling (USA)

### Plastics Committee

- **Henk Alsema**, Vita Plastics (NLD)
- **Mark Victory**, ICIS (GBR)
- **Theo van Ravesteyn**, Raaf logistics (NDL)
- **Sally Houghton**, Plastic Recycling Corporation Of California – PRCC (USA)
- **Andrei Mihai Sofian**, Rematholding Co. Srl (ROM)
- **Steve Wong**, China Sustainable Plastics Association (CHN)
- **Max Craipeau**, greencore resources limited (CHN)

### Stainless Steel & Special Alloys Committee

- **Joost van Kleef**, Oryx Stainless BV (NLD)
- **Sean Davidson**, Davis Index (CAN)
- **Rosie Hill**, Ireland Alloys (IRL)

### Tyres & Rubber Committee

- **Max Craipeau**, Greencore Resources Limited (CHN)
- **Martin von Wolfersdorff**, Wolfersdorff Consulting (DEU)
- **Germano Carreira**, BB&G – Alternative Worldwide Environmental Solutions, Lda (PRT)
- **Andy Yuan**, Enrestec Inc. (TWN)

### Textiles Division

- **Martin Bösch**, TEXAID TextilverwertungsAG (CHE)
- **Alan Wheeler**, Textile Recycling Association (GBR)
- **Adam Minter**, Bloomberg (USA)
- **Petra Schweiger**, Accelerating Circularity (USA)

### Paper Division

- **Jean-Luc Petithuguenin**, Paprec Recyclage (FRA)
- **Sébastien Ricard**, Paprec Recyclage (FRA)
- **Florent Noblet**, TLF Overseas (FRA)

### International Environment Council

- **Olivier François**, Galloo (BEL/FRA)
- **Emmanuel Katrakis**, EuRIC – European Recycling Industries' Confederation (BEL)
- **Adina Adler**, ISRI (USA)
- **Jean-Philippe Hermine**, IDDRI (FRA)
- **Ross Bartley**, BIR

## 2022

(22) 23 – 25 May  
BARCELONA, SPAIN  
Intercontinental Barcelona Hotel

(16) 17 – 18 October  
UNITED ARAB EMIRATES  
Venue to be confirmed

## 2023

(21) 22 – 24 May  
City to be confirmed

(22) 23 – 24 October  
City to be confirmed

## 2024

(26) 27 – 29 May  
City to be confirmed

(27) 28 – 29 October  
City to be confirmed



Bureau of  
International  
Recycling

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**BIR** – THE GLOBAL FEDERATION OF RECYCLING INDUSTRIES

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