



ISN WCN 26

SUSTAINABILITY REPORT

REPORT BY **ECIT**

EXECUTIVE SUMMARY

The World Congress of Nephrology 2026 brought together almost 6,500 on-site participants at the Pacifico Congress Center in Yokohama, Japan, to share knowledge, discuss the latest developments, and connect leading experts in the field of nephrology and kidney care. Over four days a comprehensive scientific program was delivered across 12

rooms and stages, complemented by an industry exhibition with 42 exhibitors and space for 838 scientific posters, four monitors with scientific e-Posters, and 33 industry symposia. Additional evening events, such as a welcome reception in the Exhibition Hall and a President's dinner at an external venue, completed the congress experience.

Sustainability was embedded in several areas in the planning and delivery of the congress. Concrete measures included, among others, the introduction of vegetarian catering (except for side events and room catering) and the selection of a venue with a focus on sustainability. It is especially important to highlight the strong emphasis that the host put on social sustainability and inclusion: The website offered a lot of useful information for attending the congress and traveling to Japan – such as visa information, useful practical guidance, access for minors, and cultural habits –, travel grants were available to ensure attendance of lower-income individuals, a centralized hotel booking platform helped attendees to find suitable accommodation, and a translation app was available for all sessions on-site. In the Main Hall, a live transcript in English and Japanese supported better acoustic and contextual understanding. While these and other initiatives demonstrate a general willingness of the host ISN to implement sustainability and reduce the negative impact of the event, the congress also revealed room for improvement and the inclusion of more measures.

It shall also be highlighted that the host faced challenges in implementing more sustainability measures due to the habits and local norms in Japan. As Japan has strict hygiene regulations, a lot of disposable and plastic packaging is used. Vegetarian and vegan food is also not custom in Japan, which makes the commitment of ISN to offering only vegetarian and vegan options for the main catering all the more remarkable.

The following report details the congress profile, the methodology used for the evaluation, the resulting environmental performance and event carbon footprint (ECF), the sustainability measures implemented, and the opportunities identified to further advance sustainability in future editions.

METHODOLOGY

The Event Carbon Footprint is determined using the Greenhouse Gas Protocol as its methodological foundation. The methodology involves identifying and quantifying all relevant emission sources across the preparation, implementation, and post-event processes. Overall, data availability for calculating the event carbon footprint of WCN'26 was a good start with improvement opportunities. ISN showed a strong willingness to gather the requested data after the congress, but took limited action before the congress to make data collection easier and prepare service providers for it. As a result, data remain limited in specific areas.

A detailed overview of data availability for each aspect of the event carbon footprint calculation is provided below:

- **Mobility:** Distances were calculated based on the information provided by participants and exhibitors in the registration form. Participants traveling from outside Japan were assumed to arrive by plane; the modal split for participants from within Japan was based on national data; staff travel was based on team booking information; and travel for setup personnel was estimated.
- **Accommodation:** Average nights per person was calculated based on bookings via an ISN portal. The distribution of private and hotel accommodations was afterwards derived.
- **Catering:** Detailed menus and planned quantities were available for all catering organized by ISN. A good overview of the exhibitor catering was provided. Estimates based on the number of participants were used for catering outside the venue.
- **Transport:** Information on transport was available for most of the materials, but estimated for the Japanese booth builder.
- **Materials:** Data for materials and event technology were available, while the materials for booths were calculated based on inspection on-site.
- **Preparation:** Detailed numbers were provided for the traveling team and estimated for the working time before the congress.
- **Venue:** Hardly any data were provided by the venue.
- **Waste:** Data on waste generation across all areas were provided by the venue, but this did not include waste generated by the exhibition and catering, which therefore had to be estimated.
- **Digital:** Information on the number of emails sent, website clicks, and virtual participation was fully available.

AUTHORS

Tanina Schlieker combines strategic vision with operational expertise. In her leadership role at a company focused on developing innovative and sustainable solutions, she brings both a clear understanding of the challenges and potential of sustainable event management, and the practical experience needed to turn goals into effective action. Her commitment to environmental and social responsibility adds a thoughtful and well-grounded perspective to this report.

With a background in industrial engineering and a master’s degree in finance and information management, Kilian Osberghaus offers a strong analytical perspective on the relationship between ecological impact and economic viability. At ECENT, he works on the development of forward-looking solutions that connect sustainability with business efficiency, helping organisations achieve measurable emissions reductions in a practical and scalable way.

KEY FIGURES

Set Up	27th & 28th of March 2026
Congress	28th to 31st of March 2026
Dismantling	30th & 31st of March 2026

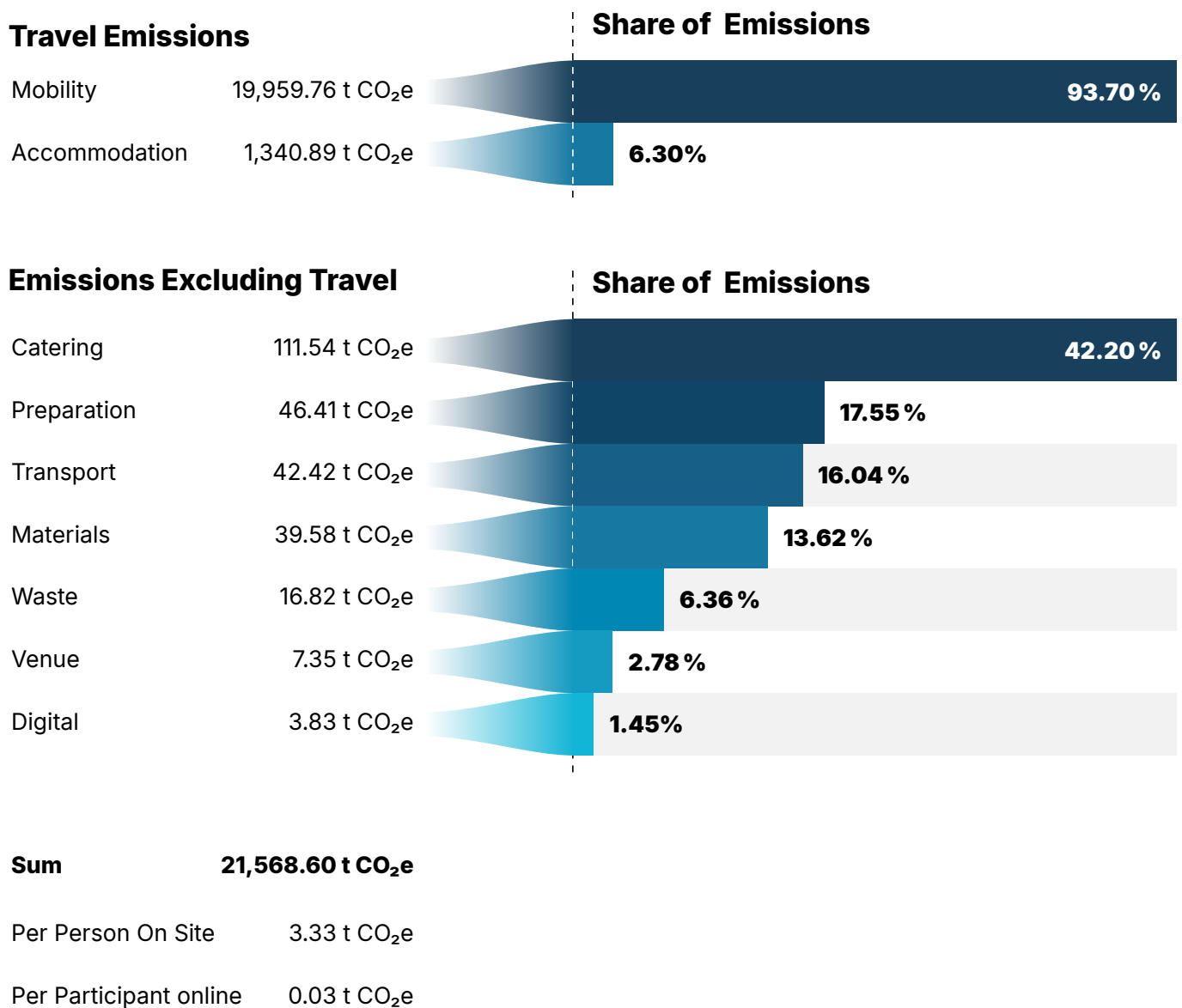
Participants on-site	5,943
Speakers	255
Exhibitors	154
Staff (incl. social media team)	115
Total on-site	6,467
Participants virtual (incl. 2 speakers)	245
Total	6,712
Crew	150

EVENT CARBON FOOTPRINT

All numbers in this report express values in CO₂ equivalents (CO₂e), encompassing the impacts of water vapor, methane (CH₄), nitrous oxide (N₂O), and other greenhouse gases, thereby accounting for total greenhouse gas emissions.

Figure 1:

Allocation of emissions to the different emission sources.



Mobility: 19,959.76 t CO₂e

Making up 92.54% of the ECF, the by far largest contribution to the greenhouse gas emissions of WCN 2026 originates from travel to and from Japan. The vast majority of these emissions (99.54%) were generated by flights, reflecting the attendance of many participants from faraway countries. By contrast, only 0.19% of these emissions were accounted for by mobility by train, car, bus or public transport to the congress and 0.27% within Yokohama, whether by cab, public transport, car or bus.

Accommodation: 1,340.89 t CO₂e

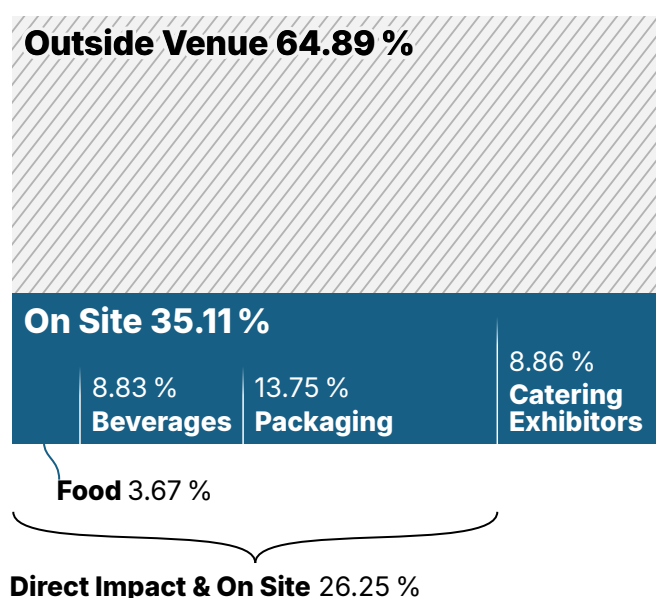
With an average of 4.37 nights per guest, participants spent 22,585 nights in Yokohama's hotels. Many of the hotels were very close to the venue, however, the hotel map did not include information about the sustainability of each hotel.

Catering: 111.54 t CO₂e

Catering at the congress venue accounted for around 35.11% of food emissions, while 64.89% resulted from catering outside the venue. Notably, 13.76% of overall catering emissions (15.35 t CO₂e) were caused by packaging.

Figure 2

Allocation of catering emissions to the different emission sources. Shares in percent of total catering emissions.

**Preparation: 46.41 t CO₂e**

The main emission source from preparation emissions were flights to the location visits (98.68%). Train rides from the organizing team and work carried out on laptops or video conferences only accounted for 1.32% of the emissions during preparations.

Transport (Goods): 42.42 t CO₂e

97.04% of the emissions generated through transportation of goods and booth materials resulted from air freight, while the remaining 2.96% are accounted for by trucks transporting materials within Japan.

Materials: 39.58 t CO₂e

43.21% of the emissions in this sector was created outside the direct influence of ISN, through the exhibition. Additionally, constructions for registration, signage, ISN booth, lanyards, pocket programs and giveaways accounted for 31.52% of material emissions. Further emissions were caused by the life-time usage of event technology.

Waste: 16.82 t CO₂e

Mixed waste only accounted for around 10% of the total waste emissions, while the largest share with 85.58% resulted from plastic waste. The emissions from other waste were caused by food waste and waste from the exhibition.

Venue: 7.35 t CO₂e

Heating accounted for 6.64 t of CO₂ equivalents, electricity for 2.32 t and water usage for 0.38 t. It is important to note that this figure only covers direct energy use and operational aspects during the event, and does not include the 'grey emissions' associated with constructing the venue. If these were factored in, the figure would be considerably higher.

Digital: 3.83 t CO₂e

Although it only accounts for 0.02% of total emissions, the digital infrastructure supporting the conference, including virtual participation, website hosting, and email communications, accounted for comparatively high emissions, as a very high amount of emails was sent out. These made up for 72.53% of the emissions, while the website accounted for 24.30% and the virtual participation for 2.09% of the digital emissions.

BACKGROUND INFORMATION

The escalating impacts of climate change represent one of the most pressing challenges of the 21st century. According to the Intergovernmental Panel on Climate Change (IPCC), the rapid increase in greenhouse gas (GHG) emissions is triggering profound consequences: "Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred"¹, which lead to weather and climate extremes, the warming of atmosphere, ocean and land, rising sea levels, lower food and water security, higher human mortality, high inequality and overall severe impact on human health and livelihood. While certain impacts are now inevitable due to past emissions, societies must prioritize **adaptation** strategies to prepare for and reduce vulnerability to these disruptions.

Additionally, the "impacts from human-caused climate change will continue to intensify"² with growing GHG emissions. Therefore, equally critical than the adaptation strategies is the need to mitigate further harm by drastically cutting anthropogenic GHG emissions (**mitigation**). Without decisive action, we might reach additional irreversible tipping points, such as forest dieback or savanna and dryland degradation. "Their triggering will severely damage our planet's life-support systems and threaten the stability of our societies."³ The Paris Agreement, which was concluded at the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21 - UNFCCC), emphasizes this urgency by setting a global goal to limit warming to well below 2°C, ideally 1.5°C, above pre-industrial levels. Achieving this target is essential to stave off the most devastating outcomes and secure a sustainable future. As the world is already

close to missing this target, we have to fight all the harder to stay as close to 1.5 degrees as possible. Even small improvements make a big difference in the long term and reduce consequential costs drastically.

Events and the Environment: The Urgent Need for Transformation

Events play a pivotal role in shaping industries and societies. They drive innovation, inspire collaboration, and spark critical conversations, making them essential to human progress and connectivity. Yet, the environmental cost of events cannot be ignored. Large-scale gatherings often result in significant waste generation, extensive resource consumption, including energy and water, and substantial carbon dioxide equivalent (CO₂e) emissions. According to a study in 2019⁴, a single event attendee produces 37 kg of CO₂ emissions and 2 kg of waste on average. With 395 million event participants recorded in Germany in 2025 alone⁵, the extrapolated environmental footprint of the event industry only in Germany is staggering: approximately 14.6 million tons of CO₂ emissions and 790,000 tons of waste in just one year. These figures underline the urgent need for systemic changes in how events are planned and executed to align with sustainability goals: With good and early planning, it is possible to reduce a lot of emissions and to save resources and waste, which this report aims to facilitate for WCN.

Tracking and Measuring Greenhouse Gas Emissions: A Foundation for Action

Reliable measurement of greenhouse gas emissions is the cornerstone of any effective emissions reduc-

1. IPCC (2023, S.5): [Synthesis Report Climate Change 2023: Summary for Policymakers](#).
2. IPCC (2023, S.7): [Synthesis Report Climate Change 2023: Summary for Policymakers](#).
3. [Global Tipping Points \(2023, S. 3\): Summary Report 2023](#).
4. [EnergieAgentur.NRW \(2019\): Climate-neutral events](#)
5. [German Convention Bureau \(2026, S. 6\): Meeting- & EventBarometer Deutschland 2025/2026](#)

tion strategy. Tracking emissions provides a baseline for understanding impact and enables progress monitoring. However, achieving accuracy is a persistent challenge, as methodologies and emission factors vary significantly. For example, estimates for air travel emissions can fluctuate by as much as 300%, influenced by factors like flight class and the radiative forcing effect. Even standardized frameworks, such as the GHG Protocol Corporate Standard, which is used for this report, refrain from prescribing specific emission factors, leaving room for inconsistency. Therefore, while emission data is indispensable for planning and improvement, it is best viewed as an evolving tool rather than a definitive metric and should primarily be used for developing reduction strategies for the following events.

The Imperative for Ambitious GHG Reductions

To meet the global temperature goals of the Paris Agreement, ambitious emission reduction efforts must be prioritized. Setting scientific targets is only the starting point; achieving them requires transformative action across all levels of operation. Ensuring a sustainable event demands collaboration with diverse stakeholders: Partners, exhibitors, suppliers, employees and visitors all play vital roles in reducing the overall carbon footprint. This involves integrating renewable energy sources, minimizing waste, incentivizing low-carbon travel options, and

embedding sustainability into decision-making processes. This report will go into more detail on potential measures and recommendations resulting from the analysis of WCN'26.

GHG Compensation "Offsetting"

It is important to further lower emissions in the first place. This report offers various suggestions on possible pathways. Still, currently it is impossible to organize a congress at this scale with zero emissions. Therefore, offsetting the remaining unavoidable emissions can be considered:

- It is crucial that offsetting does not replace direct efforts to cut emissions but complements them.
- Offsetting does not undo emissions but offsets them elsewhere, typically on a global scale. By this, the global amount of emissions remains unchanged.
- For unavoidable emissions, offsetting helps mitigate their impact and serves as a valuable complement to the reduction measures outlined in this report.
- To ensure effective offsetting, it is essential to support high-quality, verified projects that deliver long-term reduction and/ or storage of CO₂, prevent double counting and deliver positive side benefits for people and nature in the project area.

DETAILED ANALYSIS

Communication

Description of Current State:

Website: The event-website was very elaborate and provided a lot of useful information. It is structured in seven submenu points, which helped with accessibility and provided a better overview. In general, the website helped guests to prepare well and provided all necessary information.

- The submenu “About” gave context on the venue, hosts, committees, key dates, accreditation, legacy of the congress, sustainability efforts and the Awards.
- The program was depicted in detail in the submenu “Program & Experience”, where themes, courses, speakers, interactive sessions and networking options were described.
- The submenu “Attending the congress” provided detailed information on accommodation, travel and transportation, the city, practicalities and other useful information for the visit to Yokohama.
- Additionally, information on abstracts, posters and submission of both were provided, as well as registration options and other possibilities to get involved.
- For members of ISN there also was a dedicated “ISN Events Portal” that surely provided comparable information.

Mailings: Several mailings were sent out before and after the congress to communicate with the guests and provide additional information.

- After registration, a confirmation was sent.
- Several mailings leading up to the event informed about special program points or initiatives and research from the industry.
- The most informative mailing was the “Toolkit for delegates” that again listed all necessary information such as options to reach the venue,

accommodation, and earthquake safety. This toolkit was also included on the website and accessible via a link.

- A Thank-you mailing was sent out that informed about access to the recordings as well as several reminders about these recordings were sent out after the congress.

Event app: The congress was complemented by an event app, which consolidated all information and aimed to make attendance and participation on-site easier.

- The home section included a quick link to the program overview as well as push notifications with important changes or information and a list of sessions “Happening now”.
- In the program section a more detailed program overview with information on the scientific and industry program and the different stages was depicted. Additionally, it gave access to the e-Posters and live streaming and showed all speakers.
- Floor plans of the Exhibition Hall and all floors of the Conference Center helped to move around on-site.
- The section on exhibitors listed all exhibiting companies and institutions and gave a description of each.
- The last section “Information”, contained other relevant information such as opening hours, food and drink options, accreditation, access to live translation, posters and visual abstracts, and details on the Welcome Reception, Wi-Fi, Wellness Activities, Treasure Hunt, Awards Gallery, Social media wall, WCN’26 Recordings, and general information on WCN.

Sustainability Analysis 2026:

Website: Overall the website clearly shows that ISN aimed to provide as much information for the guests as possible to make the trip and preparation convenient. Additionally, they provided some information about their sustainability efforts.

- A dedicated sustainability page, which ECENT recommended in their Quick Wins report, was implemented some months before the event. It stated ISN's commitment to sustainability and their recognition of their responsibility, and listed some measures such as reduced printed materials, sustainable food practices, promoting public transportation and accommodation in walking distance, supporting equity and inclusion, and communication and education about sustainable event attendance and cultural habits. Furthermore the collaboration with ECENT and the aim to develop a long-term sustainability strategy was mentioned. The page concluded with options on how guests can act more sustainably such as choosing green travel options, offsetting carbon emissions, and reducing or recycling waste. ISN already included such a page for their last congress, which demonstrates that the topic of sustainability is of relevance for them.
- The sub-page "Transportation" provided information on public transportation and promoted the convenience of it in Japan, incentivizing people to choose this option for moving around in Yokohama and Japan.
- The sub-page "Attending the congress" clearly demonstrates ISN's dedication to social inclusion and sustainability, as it provided detailed information for the guests' preparation. This included information regarding visa and passports, the city and transportation, and practicalities on-site such as business hours, currency, bank information, emergency numbers, language, time zone, climate, and other tips and tricks and recommendations. It also gave access to a booking platform for accommodation, where ISN aimed at selecting the closest hotels, as well as access to translation and FAQs. Lastly, guests were informed that they can bring their children to the congress, which made it family-friendly.

- Guests also could find information on complimentary registration and monetary contributions for travel and accommodation on the website, which improves inclusivity.

Mailings: Sustainability aspects and measures are not mentioned in the email communication. However, the toolkit sent out before the congress once again aimed at preparing and informing guests as well as possible beforehand.

Event app: The event app contained the relevant and detailed information that was also included on the website, which once again helped guests prepare and find their way around on-site. However, no other sustainability measures or aspects were mentioned in the event app.

Recommendations

Most of the measures on the sustainability page were visible during the event. However, the statement that 'leftover food will be available for participants to take home', was not implemented at the actual congress due to hygienic regulations by the catering provider. Additionally, the proclaimed aim to provide more information about sustainable event attendance was not really visible in any other communication channel or on-site. The proclaimed measures and the actual measures undertaken should not differ and it is advisable to only list measures that will surely be implemented.

Before the event, ECENT recommended to include information on offsetting options and concrete offsetting providers in the section "Airports and Airlines" to raise awareness about the high impact on flying and incentivize guests to directly take sustainable action. Unfortunately, the suggestion was not implemented, which could instead be done for next year's congress. As mobility accounts for the large majority of the emissions due to the necessity for a majority of guests to fly, it is recommended to educate guests about this large contributor and enable them to reduce their impact. Also, information on the different emissions depending on the flight classes should be provided to influence people on their travel choice.

Information on sustainability, sustainable event attendance and sustainability measures should also be included in the email communication and the event app to ensure maximum visibility and several communication touchpoints for the guests, which will improve the likelihood of them to adapt their behavior.

On-site, no educational measures on the effects of certain behavior were taken. It is advisable to include informational posters on sustainable event behavior, and the effect of food and travel choices or waste management practices. This does not only educate guests but also improves the likelihood of behavioral change.

Program

Description of Current State:

The program of WCN was very elaborate, spreading over 12 rooms in total: three stages, eight rooms for courses and smaller, in-depth sessions, and the Exhibition Area. It was a highly professional program offering a wide range of specialisations.

Some networking options were included such as the Welcome Reception on the first day and Poster Sessions on each day.

In addition to the professional sessions and courses, a supporting program was offered, such as so-called "Wellness activities" (table tennis and Haiku writing or Origami crafting), a Japan Quiz provided by the Young Nephrologists, and an ISN Community Film event.

Sustainability Analysis 2026:

The scientific program contained several sessions that dealt with sustainable practices and topics. The topic of health and patient care in general includes social aspects, but ISN clearly also placed a focus on international collaboration, equity and social sustainability in their program conceptualization. In total, 20 sessions dealing with environmental or social sustainability were identified.

- On the first day the session "Advancing Sustainable Kidney Care" dealt with sustainability in the industry, and on the second day the session "Kidney Health for All – Caring for People, Protecting the Planet" also addressed the topic of environmental sustainability. Another session on Monday dealt with Bioengineering and a session on Tuesday with Climate and Conflict.

- Social aspects in particular, such as gender disparities, community care, home dialysis, joint collaboration, and inclusion, played an important role in the program. 11 sessions in total dealt with these topics, for example the session "Bridging the Gap – Addressing Gender Disparities in Kidney Health" on Saturday, "Why Primary and Community Care Matter for Kidney Health" on Sunday, "The Global Kidney Health Atlas: Advancing Equity and Excellence in Kidney Care Worldwide" on Monday, "Peritoneal Dialysis for Everyone, by Everyone, Everywhere" on Monday, or "Delivering Kidney Care in Humanitarian Crises" on Tuesday.
- Ethical topics and questions were also addressed, namely the session "Confronting Organ Trafficking – Policy, Ethics, and Prevention" on Monday and the session "Navigating Ethical Challenges in End-of-Life Kidney Care" on Sunday.

Three table talks additionally discussed sustainability elements: "Beyond Dialysis: Personalizing Kidney Care in the Era of Aging and Innovation" on Sunday, "Women in Nephrology – The Art of Enough: Integrating Work, Life and Purpose. What realistic strategies have helped you find balance?" on Sunday and "Empowering Each Other: How can we actively lift up and amplify women's voices in our field?" on Monday.

Many of the scientific posters displayed in the exhibition dealt with the topic of pregnancy and health.

The supporting program accounted for some relaxation, variety, and creativity alongside the scientific program, which was a nice addition. The Japan Quiz also gave more background information on Japan

and its culture, increasing education and awareness about it. The session was very well-received and had a large audience with many people standing around the stage as seats were filled.

Recommendations

While the program generally featured several sessions regarding social and environmental sustainability, they could have been implemented more prominently into the program. As the importance of sustainability is greater than ever, it should also be highlighted in the most-visited sessions on the Main Stage, such as in the Opening or other suitable sessions on the Main Stage. Examples like the Japan Quiz demonstrate that the interest in such sessions can be very high and accordingly, enough space and seating should be ensured whenever possible. Purposely highlighting these topics in the program by including them on the Main Stage demonstrates their importance and the dedication to sustainability. Several of the sessions relating to sustainability took place at the same time, preventing people from visiting all of the sessions if they wished to do so. This should be avoided wherever possible and instead spread out through different time slots.

Networking opportunities should be prioritized at the next edition of WCN as collaboration and community is such a strong focus of ISN and one of the main reasons for people to attend an event in gen-

eral. Therefore, in addition to the offered networking options, ISN could include a networking platform where communication between the guests is possible, meetings can be booked and people can more easily get in touch with each other. A dedicated Networking Area could also help here, facilitating new conversations as guests can signal the interest to engage. Additionally, sessions such as "speed networking" or "randomized networking sessions", with a clear structure and prepared questions for the guests, can help guests to network.

Especially for such an international event, where a majority of the guests have to travel abroad and often alone, options to connect can be crucial for feeling comfortable and to avoid loneliness. Here, a platform, where guests can interact, can once again help. Additionally, evening program points, for example a dinner on a self-pay basis, can be a low-effort and highly effective way to connect people. A more elaborate way could also be organizing shared tours and excursions before and after the congress.

The "Wellness activities" and relaxation opportunities could be more elaborate at the next congress. Additionally to quiet rooms (see next section), the program could contain dedicated sessions for relaxation such as meditation, Yoga or other mindfulness activities. On long and full conference days such additional program points could help guests digest their knowledge and give room for rest.

Yokohama and Pacifico Yokohama

Description of Current State:

WCN'26 took place in Yokohama, Japan.

Pacifico Yokohama served as the venue for the congress and offered a well-equipped and centrally located setting for an international event of this scale.

In terms of accessibility, Pacifico Yokohama benefits from a very central location. The venue is well connected within Yokohama and also linked efficiently to Tokyo through public transportation. ISN also deliberately selected hotels with a close proximity to the venue in their booking platform, en-

abling guests to walk to the congress. During the event, only very few cabs were observed around the venue. Some bicycle racks were available near the Exhibition Center, and a parking garage was located directly at the site, although it remained unclear to what extent it was used by participants.

The venue generally offered many different rooms, allowing for a well-thought-out floor plan that included a Main Stage, many different program rooms, a prayer room, a children's play area, a breastfeeding area and some co-working options. The Exhibition Hall was right across the Conference Center with only a minimal walking distance. There

was, however, no indoor connection, making it sensitive to the weather conditions.

A stand by the Yokohama Visitors Bureau offered useful tourist information on Yokohama.

At the main entrance, several staff members from the venue were stationed with visible “Can I help you?” signs, including already on the day before the congress. They were very friendly and supportive during check-in and orientation, contributing to a welcoming and well-organized arrival experience.

Seating capacity was limited in some areas, especially during catering times, when many participants had to eat standing.

Sustainability Analysis 2026:

According to its public communication, the venue places a strong emphasis on sustainability and presents this commitment transparently on its website. They claim carbon neutrality of their energy consumption (partially by offsetting) and partly locally sourced energy (partially from solar power), commitment to 100% recycling, and rainwater utilization, and are also certified to the international standard ISO 20121.

One particularly noticeable feature was the venue’s waste separation system. Different waste garbage cans were provided and were positioned at central points, for example on each floor near the escalators and at the entrance to the exhibition area. The signage not only distinguished between waste fractions but also explained what would happen to the waste after disposal. Although not all visitors appeared fully confident in using the system correctly, the infrastructure itself was well designed and visible.

Operational energy-saving measures were also observed, particularly outside peak hours. Escalators were shut down at night, remained off during parts of dismantling and were also slowed down when not in use. In toilet areas, lighting was switched off in the evening and operated via motion sensors. In general, electricity use appeared to be managed quite strictly, with systems switched off after 10 p.m. or only activated during defined operating hours.

The hosts paid attention to aspects of social sustainability and accessibility in their room plan and included special rooms and spaces such as several co-working areas, prayer rooms, a children’s playroom, and a breastfeeding area. The children’s area, while not very large, was actively used and furnished with books, cushions, and child-friendly equipment. In their communication before the congress, ISN also informed guests about the option to bring kids. Children were visibly present during the congress, showing that these measures worked well. In addition, an information stand from the Yokohama Visitors Bureau was available on-site, which added value for international participants.

The central location of Pacifico Yokohama and the excellent public transport connections within Yokohama and to Tokyo supported lower-emission mobility options for local and domestic participants and reduced the need for cabs or private car use once attendees had arrived in Japan. The availability of bicycle parking also supported alternative mobility, even if it was likely of limited relevance for international participants.

Still, the broader geographic location of the congress needs to be considered critically. While the venue itself was centrally located within Yokohama, Japan is a destination that requires long-haul air travel for a large share of international participants, resulting in particularly high emissions in this area.

Recommendations

Although prayer rooms were available, there were no dedicated quiet or relaxation rooms for participants seeking rest during the day. In addition, the limited availability of seating represented missed opportunities to strengthen participant well-being and inclusive event design even further. Especially for lunch hours, the hosts should try to include more seating options and rest areas.

As guests seemed to struggle with the correct waste separation, the existing waste separation system should be complemented by even more user-friendly guidance. Although the garbage cans were clearly labeled, additional visual examples, multilingual explanations, or staff support at key

disposal points could help improve correct participation and reduce contamination of waste streams.

The venue and event organizers could explore visible water-saving measures as these could not visibly be identified during the congress. These could include communication about efficient sanitation systems and the appeal to save water where possible. Making these efforts more transparent would strengthen the overall sustainability profile of the venue.

When selecting future congress destinations, the accessibility of the host city in terms of lower-emission international travel should be considered more strongly alongside venue quality. Pacifico Yokohama performs well at the site level, but the broader emissions impact of long-distance travel to Japan remains a significant sustainability challenge. If global rotation of event locations is maintained, this trade-off should at least be acknowledged transparently and, where possible, addressed through complementary mitigation measures.

Materials and Constructions

Description of Current State:

Physical and digital materials were used on-site for participant information, orientation, branding, technical delivery, and exhibition purposes.

Materials for guests:

- Printed program booklets were distributed at registration and were visibly used by many participants. These booklets were not widely placed throughout the venue, but handed out in a controlled manner at the registration desk.
- Conference bags were provided with a print of WCN'26. A total of 6,000 jute bags had been ordered based on an expected attendance of 6,500 participants, with a slightly lower production volume chosen as a precaution. Initially, they were available only for collection at the counter, but toward the end of the congress they were laid out openly so that anyone could take one, indicating that a significant number of bags was left over.
- Guests received a lanyard and badge upon entry as is customary for a conference. The badge itself was made entirely of paper, which still proved durable throughout the event. Badge printing was handled on-site using printers, tablets, and scanning devices and they were only issued once with a fee of USD 75 for reprinting. The lanyards were branded with the event year and design elements and not collected after the congress.

- Additional giveaway items were intentionally limited. According to the organizers, gifts were only provided for VIPs, with an effort made to select something usable rather than purely decorative. In this case, chopsticks were chosen.
- Participation certificates were handled digitally and were only made available for download rather than printed in advance.

Signage and posters:

- Physical signage elements for program information, directions, and sponsors were used on-site, but the amount seemed relatively limited compared to other congresses on that scale.
- The path toward Pacifico was branded with 24 small flags with the conference name and three very large banners. At the entrance, a banner gave directions to the Conference Center and Exhibition Area and a "Welcome to WCN" rollup was placed at the Conference Center entry.
- Inside the Conference Center, five large display stands (around five meters long and two meters high) with the program or as a picture/press wall were placed throughout the five floors, additionally 26 mid-size display stands (around one meter long and 1.8 meters high) and four small ones were used for further signage. All of this signage seemed to be made from plastic sheeting and Styrofoam, for the large signs these were placed on wood constructions, the smaller signs used existing display stands made from metal and hard plastic.

- Promotion for sponsors and exhibitors in the Exhibition Area was stuck around columns or hung up.
- A few digital screens were in use, but focus for directions remained on physical signage.
- Room occupancy notices were handled using printed paper signs. These signs were reused across multiple days, which reduced their overall material impact.
- In the Exhibition Area, over 800 printed posters were used for scientific presentations. At the same time, four digital e-Poster stations were provided in the Conference Center, where participants could browse electronic posters.

The event also relied on a substantial amount of technical equipment, particularly at the stages. The setup included speakers, monitors behind and beside the stage, microphones, cameras and livestreaming equipment, a video mixer, and smaller preview monitors and timers. This reflected a hybrid and technically well-supported event format.

The event logistics and furniture was handled based on rented and reusable items, complementing the already existing venue amenities. A truck used for transporting chairs, tables, armchairs, and other materials was observed to be loaded very efficiently, with many items packed in reusable cage boxes. For protection during transport, blankets and previously used plastic foil were often employed. However, some furniture items were wrapped in completely new plastic foil.

Sustainability Analysis 2026:

An effort to limit unnecessary items and materials was visible: Gifts were restricted to a small group of VIPs and chosen with practical use in mind, participation certificates were handled digitally rather than printed by default, and digital options were explored for posters and some signage.

The badge design also stands out positively: using a paper-only badge that was durable in practice represents a resource-conscious alternative to more complex plastic badge systems. With the live-printing system in place, only the badges of present guests were produced, saving resources for no-shows. The policy of charging for badge reprints

further reduced the likelihood of avoidable replacement production during the event.

The jute conference bags carried an eco-label, showing that sustainable aspects were of relevance for the organizer. They also tried to take into account that not all guests would take one bag, ordering 500 bags less. Still, the fact that a significant amount of bags was laid out in the end suggests that demand may have been overestimated or that distribution could have been better aligned with actual participant needs. While the bags themselves are reusable and made from ecological material, surplus production still reduces the environmental benefit.

The printed program booklets and poster exhibition involved substantial paper consumption. A particularly relevant issue was that many posters appeared to be left behind after the event, indicating low post-event use and high material waste. To reduce waste, ISN already explored digital alternatives, which were available through e-Poster stations and online. However, these were not yet prominent or numerous enough to fully replace print.

In general, many event materials were not designed for reuse across future editions, as they were branded specifically for Japan and for the 2026 congress. This applied in particular to lanyards and signage. Additionally, according to the organizers' own statement, sustainability criteria had not played a role in the procurement of materials.

The apparent use of rented furniture and reusable transport containers points toward established reuse practices of the logistical supplier. Protective measures during transport also showed effort to reuse existing materials such as blankets and previously used foil. Nevertheless, the use of new plastic wrapping for some items demonstrates that reuse was not applied consistently across all logistics processes.

Recommendations

A sustainability-oriented procurement policy should be introduced for all event materials. This should include criteria such as use of sustainable materials (such as recycling paper or innovative materials from natural resources), recyclability, durability, and

reuse potential. Sustainability should be considered from the beginning of the ordering process rather than addressed only afterward. This also includes making branding decisions that support reuse, such as not including the event year and a more generic design. Event-specific inserts or modular branding elements can provide visual identity without rendering the entire item obsolete after one edition. However, ECENT also recognizes the fact that reuse in this case would include air freight due to the congress taking place in Japan, which is not the location of ISN's offices. Still, reuse should be carefully considered for each new congress edition and applied wherever possible.

The need for printed program booklets should be critically reviewed. If many participants still value a printed overview, a shorter version or print-on-demand approach could reduce paper use while still meeting user needs. Greater reliance on digital schedules and mobile access could further reduce

the need for comprehensive printed programs. Similarly, the poster concept should also be revised. Given the large number of printed posters that were left behind, a stronger shift toward digital poster formats is recommended. This could involve more e-Poster stations, better visibility of these stations, and a clearer integration of digital posters into the scientific program.

Quantities for giveaway items could be calculated more rigorously with a higher estimated rate of people that will not collect the item in mind. Generally, the need for a conference bag or a giveaway could be critically reviewed.

Digital signage should be expanded further where operationally feasible. Existing use of screens already provides a basis for this transition. Room information, program changes, and sponsor communication could increasingly be handled digitally, reducing the need for temporary printed signage.

Exhibition

Description of Current State:

The Exhibition Area combined different booth formats and presentation styles. In total, there were 26 shell scheme booths and 17 custom booths. The shell scheme booths were generally more standardized in appearance and appeared to rely largely on rented furniture and modular elements. The custom booths, by contrast, were often much more elaborate, with large individual structures and purpose-built components.

The poster exhibition formed another large part of the overall Exhibition Area, with a total capacity of 838 poster spaces available. However, not all of these were used, and empty spaces were repeatedly observed. Based on a spot check in one area, around 20% of the available poster spaces remained unused.

Additionally, the Exhibition Area contained two food areas and a large area for co-working and for smaller initiatives, who presented themselves with rol-

lups. This presentation form appeared to be relatively flexible and the rollups were not specifically branded for the event and taken home after the congress.

The handling of exhibition materials, construction and dismantling overall appeared to be highly centralized and managed largely by one central contractor. All furnishing (chairs, tables, plants, etc.) seemed to be rented and provided by this contractor.

The use of promotional printed materials in the exhibition was comparatively limited. Some exhibitors and individuals distributed flyers, but this was only observed occasionally and did not appear to be a dominant communication format.

The co-working and food areas were fitted with carpet, the rest of the space was largely concrete flooring. 27 booths also used carpet, 7 booths a wooden floor construction (often covered by carpet), and 13 booths refrained from any floor covering.

Sustainability Analysis 2026:

One of the main strengths with regards to sustainability was the centralized handling of booth construction and dismantling. Since a single service provider appeared to manage most of the setup and removal, there is likely greater potential for standardized reuse, coordinated recycling, and more efficient logistics than in a fragmented exhibition system. This is particularly relevant for shell scheme booths and rented furniture, which seemed to rely largely on modular and reusable components. Similarly, the reuse of plants for future events indicates that some thought has been given to extending material life beyond a single congress.

According to the contractor, some of the custom booth materials, especially wood, which was collected separately from the remaining waste, are recycled. At the same time, the custom booths still represented the most material-intensive part of the exhibition. Their often large and highly individualized structures are likely associated with higher embodied resource use, transport effort, and setup complexity than standard modular booths. Even if wood is recycled afterward, recycling remains less preferable than direct reuse of complete structural elements. Still, ECENT recognizes a first step toward acting sustainably in the recycling efforts.

Individual exhibitors:

- Although some of the branding was relatively neutral, it was often printed directly onto the modular wall, making it impossible to reuse the signage for other congresses to display their product or company. However, here again the distance to Japan also plays a role, which makes reuse less suitable in this specific scenario as it requires air freight. The modular wall systems themselves presumably will be re-covered or re-labeled for future use.
- The comparatively low volume of flyers and paper handouts in the exhibition suggests that exhibitors were not heavily dependent on disposable print marketing. The presence of reusable roll-up banners in some cases also demonstrated that low-material and portable display formats can work effectively in this context.
- A post-event survey sent out to the exhibitors contained two questions about sustainability measures, which was taken by 11 exhibitors. To the question, if they will be reusing any materials from the booth, two exhibitors answered “no”, five “yes” and four gave no answer to that question. The second question, if they included sustainability in the planning process, was answered with “no” by one exhibitor, with “yes” by four and with “partially” by one person, while five exhibitors gave no answer to this question. This suggests that the approach to sustainability and the recognition of responsibility differs for the exhibitors.

The fact that not the complete Exhibition Area was carpeted, and therefore total material use was limited compared with more heavily staged trade fair environments, is already a first step toward a more sustainable exhibition design. However, the carpeting that was used did not appear to follow a closed-loop model as it relied on single-use carpet, which were disposed of after use.

Recommendations

Greater emphasis should be placed on modular and reusable booth concepts. Shell scheme structures already provide a strong basis for this and could be promoted more actively as the preferred exhibition format. For custom booths, exhibitors should be encouraged to design stands using reusable components and to minimize one-off construction where possible.

Guidelines for exhibitors should explicitly address material sustainability. These guidelines could include recommendations or requirements on reusable structures, recyclable materials, limited use of temporary decorative elements, and avoidance of unnecessary single-use components.

The use of single-use carpet should be critically reviewed. Where flooring is not functionally necessary, concrete floors may remain preferable from a resource perspective. If carpet is needed for comfort or acoustic reasons, reusable rental systems or take-back solutions such as carpet tiles or other innovative materials should be prioritized over disposable tiles.

The poster concept should be reassessed in light of occupancy and high material demand. A stronger shift toward e-Posters or hybrid poster formats could reduce unnecessary printing and transport. If printed posters continue to be used, better confirmation and management of poster attendance could help avoid preparing unused display space. Additionally, poster providers should be encouraged to design their poster for reuse.

The centralized contractor model should be maintained and used strategically as a sustainability

lever. Since one provider appears to manage much of the material flow, this creates opportunities to set common standards for reuse, recycling, and documentation across the exhibition.

A more transparent documentation on the end-of-life or reuse pathways of exhibition materials would improve future sustainability assessment. In particular, it would be valuable to know what share of wood, signage, flooring, furniture, and decorative elements is directly reused, recycled, or disposed of after the event.

Catering

Description of Current State:

Catering was offered throughout the event day in several formats. In the mornings, participants were provided with small breakfast snacks such as cookies and cake, accompanied by hot beverages (coffee and tea). During each lunch break, attendees received a traditionally Japanese bento box and a juice pack containing green tea. In addition, snacks and drinks were available in the late afternoon, while the Welcome Reception and side events offered a broader food and beverage selection.

Food service was distributed across multiple stations within the venue rather than concentrated in one central area. This decentralized setup created several points of access and helped to spread participant flows. In the exhibition hall, service personnel additionally circulated with small trolleys offering drinks and selected food items, which was perceived as a convenient and participant-friendly service element.

According to ISN, the regular congress catering was fully vegetarian or vegan, with the exception of the side event dinner and the welcome reception. At the latter, nine dishes were offered in total, of which one contained meat and two contained fish. Catering provided during industry symposia was organized independently and included both vegetarian and meat-based options.

Signage for food options was present but not consistently effective. On the first day, descriptions were only minimally visible, in some cases limited to two printed sheets, while some lunch stations lacked signage entirely. This improved over the following days. In the Exhibition Hall, food was generally labelled, although the signs were rather small. Catering personnel were often available to help participants choose between the available options.

All food was served using disposable tableware. Plates were made of durable plastic-like materials, forks were disposable hard plastic, chopsticks were single-use bamboo, and beverages were served in paper cups that appeared to be coated. Before service, prepared food was covered with large sheets of plastic foil, which were removed when the buffet opened.

Drinking water was made available via nine water dispenser stations distributed across the Conference Center. Disposable cups were provided at these stations, but participants were also able to refill their own bottles. Additional beverages in the Exhibition Hall, for the Welcome Reception and snack breaks, included beer, orange juice, prosecco, wine, Coca-Cola, and other drinks. In internal meeting rooms water was generally not provided, except for speakers. The Convention Hall also contained several vending machines with other beverage options, which is very common in Japan and can be found on every street.

Seating capacity in catering areas was limited, especially in the Conference Center. As a result, many participants ate standing, which may be acceptable for snacks but was less suitable for lunch breaks. Due to the lack of seating, some guests also used program rooms for eating.

Sustainability Analysis 2026:

The focus on vegetarian catering represented a strong sustainability measure, as plant-based food generally has a considerably lower environmental footprint than menus with a higher share of animal-based products. This is especially remarkable as vegetarian cuisine is not customary in Japan.

However, it was also noted that team catering was not vegetarian-focused and therefore did not reflect the sustainability ambitions visible in other catering areas.

The wide availability of water dispensers in the Conference Center encouraged the use of refillable bottles and reduced dependency on commercially bottled water. The decentralized arrangement of catering stations also improved accessibility and reduced crowding and waiting times.

Another sustainable measure was the clear effort to implement waste separation. The venue aimed to separate waste into several fractions: In the Exhibition Hall, trash bags for flammable waste and non-flammable waste, or plastic only were available. In the Conference Center, separation also aimed to account for bento boxes, beverage cartons, and food waste. In practice, however, participants did not always follow the intended sorting system and often disposed of items in the nearest available garbage can. Service personnel in the Exhibition Hall were observed correcting this by manually resorting waste, which reflected a strong operational commitment to proper disposal. Leftover food at buffets was consolidated into fewer containers toward the end of service in order to avoid opening additional dishes unnecessarily.

At the same time, the catering setup also revealed important weaknesses. The most significant sustainability issue was the extensive use of single-use materials. Nearly all food and drinks were served in

disposable packaging or tableware, including individually packed bento boxes, disposable cups, cutlery, and additional plastic coverings for food preparation. This created a considerable amount of packaging waste and undermined some of the environmental benefits of the largely plant-based menu. The use of disposable cups at water stations was particularly noticeable, given that water refill points are generally most effective when paired with reusable bottle or cup use.

Signage and communication regarding food choices also left room for improvement. While staff could often clarify options, sustainability-oriented catering works best when information is immediately visible, accessible, and easy to understand. The weak signage on the first day may have limited participants' awareness of the vegan offering, could have resulted in people choosing options they later dispose of, and generally reduced the visibility of the sustainability concept behind the catering.

Recommendations

Introduce reusable tableware wherever feasible. Replacing disposable plates, cups, and cutlery with reusable alternatives, especially for lunch service and water stations, would reduce waste considerably. If full reusables are not logistically possible, priority should at least be given to reusable cups and cutlery, as these are highly visible and frequently used items. This should be supplemented with stronger promotion of reusable bottles such as clear prompts encouraging participants to use their own bottles, combined with the sale or distribution of reusable bottles. Additionally, other packaging regarding food delivery and service, such as individually packed offerings and extensive plastic foil coverings, should be minimized where possible.

In addition to reducing waste, waste separation communication and efforts should be increased. Since many participants did not follow the system correctly, garbage can design should make correct disposal easier at first glance without relying on staff correction. Larger, clearer signage with visual examples, multilingual labeling, and more intuitive trash can placement can be of use here.

Maintain and expand the plant-based catering ap-

proach. The largely vegetarian concept should be continued, as it represents a strong sustainability measure with high impact. This approach should also be extended more consistently to side events, internal catering, and team catering in order to lead by example across all event formats. The focus could also shift toward more vegan options, further focusing on completely plant-based options.

Improve signage and communication around food options and sustainability benefits. Clearly visible and consistent signage should be available from the first day onward at all catering stations to avoid food waste due to unclear labeling. In addition to listing ingredients or dish names, labels could explain when meals are vegan, low-waste, or otherwise aligned with the event's sustainability goals.

Future planning should also include agreements with catering providers on how leftover food is handled. If local regulations permit, options such as redistribution, donation, or structured internal reuse should be explored and implemented where possible.

Providing more seating is especially important for social sustainability aspects as it enables guests to eat more comfortably, take a break and rest during the extensive program. It also helps ensure that food is consumed in designated areas and reduce spillover into program spaces.

While the availability of free water was very high in the Conference Center, water dispensers should also be included in the Exhibition Hall.

PARTICIPANT VOICES

To complement the assessment of the congress's sustainability performance, a small number of short on-site conversations were conducted with participants during the event. The aim was to better understand how attendees perceived the congress in terms of sustainability, which measures they noticed, how they traveled locally in Yokohama, and how long they stayed on-site. It should be noted that several participants could not be included in the qualitative evaluation due to language barriers, and in some cases the questions were only partially understood. Additionally, due to the low number of conversations, the answers cannot be generalized. Nevertheless, the conversations provide a valuable insight into individual impressions of the sustainability of the congress.

Overall, participants perceived the congress as moderately to highly sustainable. Among those who provided a numerical rating, the event was most frequently rated seven to eight out of ten, indicating a generally positive impression. A small number of respondents were unable to give a rating, either be-

cause the question was not fully understood or because they found it difficult to express their perception as a number. In a few cases, language barriers limited the depth of the exchange.

When asked about visible sustainability measures, participants most commonly referred to waste separation and recycling efforts. Several guests also mentioned the use of reusable or eco-friendly materials, reduced use of plastic, and generally low levels of visible waste. Specific examples included the absence of plastic on badges, biodegradable materials, and catering practices perceived as reducing waste, such as smaller portion sizes and limited packaging. Some participants also appreciated the intention communicated by the venue and hosts through signage and environmentally friendly messaging. At the same time, not all respondents were able to identify concrete measures and most of them centered around waste management while other measures were not identified, which suggests that while sustainability actions were present, their visibility could still be improved.

A few participants offered constructive suggestions for future events. These included expanding digital solutions such as focussing on the e-Posters and QR codes with more details online, and larger shared screens in order to reduce printed materials further. One participant also noted the contradiction between sustainability efforts at the venue and the fact that international travel to Japan remains emissions-intensive, highlighting the broader challenge of organizing global congresses sustainably.

With regard to mobility in Yokohama, the responses showed a clear preference for low-emission local transport options. Most participants reported walking, using public transportation, or traveling by train or subway. This was particularly common among both local attendees and international participants once they had arrived in Yokohama. Only one respondent

explicitly mentioned using cabs in addition to walking. Local accessibility and short distances between accommodation and venue appeared to support more sustainable mobility choices during the congress.

The duration of stay in Yokohama generally ranged between three and six nights, with four nights being the most common response. Some participants were local and therefore did not require hotel accommodation.

In summary, participant feedback suggests that the congress's sustainability efforts were recognized and appreciated, especially in relation to waste management, material choices, and local mobility, while also pointing to opportunities for stronger communication and implementation of additional and comprehensive measures.



Editorially responsible:

Tanina Schlieker, Kilian Osberghaus

Layout:

Simon Hirschmann

Publisher: ECENT GmbH

Zentnerstraße 1, 80798 Munich
+49 176 41846536, kontakt@ecent.eu
<https://ecent.eu/>



ECENT IS YOUR EVENT MANAGEMENT
AGENCY FOR TRULY SUSTAINABLE EVENTS



Our goal is to create unforgettable events that not only exceed your expectations,
but also protect our planet by integrating sustainability holistically