

Encouraging diversity in the aviation sector

By Maria Vittoria Corazza (Sapienza University of Rome) and Jane Hupe (ICAO)

General Questions

1. Can you share your journey in aviation and what initially inspired you to pursue a career in this field?

Maria Vittoria Corazza: My journey is relatively short as I started teaching Air Transport at Sapienza University of Rome only in 2017. To be honest, this was not my first choice as a researcher in transportation studies, but I was soon attracted by the complexity of aviation, a multifaceted world, encompassing physics and mathematics; technological, regulatory, economic, and geopolitical dimensions, operational dynamics and, last but not least, environmental challenges.

Jane Hupe: My journey into aviation was not linear, but it has been deeply fulfilling. I started my career rooted in a passion for environmental protection. Early on, I realized that if we are to make meaningful progress on global sustainability, we must engage with sectors that are both essential and environmentally intensive—aviation being one of them. During my university years, I became increasingly aware of how the aviation sector was evolving—both technologically and geopolitically—and how critical it was for environmental voices to be part of that transformation. I was drawn to the opportunity to bring sustainability into a field traditionally driven by speed, efficiency, and connectivity. Over the years, I have been privileged to work at ICAO, where I could help shape international standards and support States in developing policies that address aviation's environmental impacts. This global perspective—working across cultures, regions, and technical disciplines—has kept me inspired and grounded in purpose.

2. From your perspective, how can diversity—across gender, backgrounds, and experiences—shape the future of aviation, particularly in advancing environmental sustainability?

Maria Vittoria Corazza: The fifth goal outlined in the United Nations' "Agenda for Sustainable Development by 2030" underscores the pivotal role of gender equality and the OECD (Organization for Economic Co-operation and Development) emphatically asserts that nations grappling with the segregation and discrimination of women struggle to fulfill sustainability criteria. **Focusing on aviation, diversity across gender plays a pivotal role in advancing aviation's environmental sustainability by fostering innovation, enhancing problem-solving, and driving systemic cultural shifts.** This also aligns with broader societal goals of fairness and inclusion.

Take as examples the ICAO's gender equality resolution (Resolution A41-26 refers) and EUROCAE's standards for sustainable aviation systems, both showing how women in leadership roles prioritize long-term environmental goals. Moreover, broadening talent pools helps address labor shortages in critical roles (e.g., pilots, engineers) while integrating underrepresented groups into green aviation projects. I think that visions like the ECAC's Diversity Network, advocating for policies that link social equity to sustainability goals, such as the EU Green Deal's climate targets, can really enhance environmental decision-making process, or that training programs that emphasize diversity and sustainability, such as ENAC's gender-focused curricula, prepare the next generation to lead green transitions.

Jane Hupe: Diversity is not just a value—it is a strategic imperative, especially in a sector like aviation that operates on a global scale and faces complex sustainability challenges. Different life experiences, cultural insights, and professional backgrounds bring unique lenses to

problem-solving. In my work at ICAO, I have seen firsthand how inclusive teams produce more robust environmental policy—whether it is crafting ambitious climate goals or developing new frameworks for sustainable fuels and cleaner technologies. Diversity helps question entrenched assumptions and encourages more holistic thinking. This is particularly important in environmental matters, where solutions often require interdisciplinary and cross-cultural collaboration. Greater gender balance and broader representation in technical and decision-making roles can also strengthen aviation’s alignment with the UN Sustainable Development Goals, particularly SDG 5 and SDG 13. A diverse aviation sector is better equipped to innovate, adapt, and lead in addressing the climate crisis.

3. What challenges have you encountered in your career, and how have you navigated them?

Maria Vittoria Corazza: A female academic in aviation or related study fields may face typical, systemic gender-based challenges rooted in cultural norms, institutional structures, and societal opportunities. Male-dominated environments often marginalize women’s contributions, particularly in decision-making processes and career opportunities. For example, few women in senior academic positions result in sparse mentorship networks, underrepresentation in conferences, publications, and leadership roles perpetuates a cycle of exclusion, the work-life imbalance represented by rigid academic schedules can disproportionately affect women, particularly in fieldwork-heavy disciplines like aviation and more in general transportation studies. **The strategy is to build research’s support network by collaborating with interdisciplinary teams to amplify visibility and share resources**, and, in my case, to highlight how gender intersects with sustainability in aviation. Examples like those by the International Aviation Women’s Association (IAWA) to seek sponsors (not just mentors) and/or any initiative of public engagement (write op-eds, host podcasts and the likes), are additional, excellent strategies. More strategies belong to the institutional advocacy field, like policy reforms on parental leave extensions (e.g. on tenure-clock pauses) or remove unconscious bias in hiring and promotions.

Jane Hupe: Advocating for environmental change in aviation has not always been easy. For many years, sustainability was seen as a secondary concern—something that could be

addressed once the core priorities of safety and efficiency were met. Navigating that mindset required persistence, diplomacy, and a clear vision. I often found myself in rooms where the environmental agenda needed stronger champions, and I learned to present data-driven arguments, build coalitions, and engage in constructive dialogue with States and industry. Another challenge has been ensuring that developing countries are not left behind in the transition to sustainable aviation. This meant emphasizing capacity-building and support mechanisms, which I have worked on extensively through ICAO’s ACT initiatives. Ultimately, I believe that change is possible when you combine technical knowledge, strategic patience, and inclusive partnerships

Environment & Sustainability Focus

5. In what ways do you see diversity driving innovation and progress in aviation’s environmental sustainability efforts?

Maria Vittoria Corazza: I think that by fostering inclusive cultures, leveraging diverse perspectives, and expanding talent pools, the industry can accelerate innovation to achieve net-zero goals while ensuring long-term viability.

Jane Hupe: Innovation thrives in environments where different perspectives are encouraged and respected. In the environmental field, this is particularly crucial. Solutions to climate-related challenges require us to think differently—to imagine new systems, technologies, and behavioral patterns. Diversity, whether gender-based, cultural, regional, or disciplinary, injects creativity into this process. At ICAO, I have seen how diverse expert groups—comprising engineers, scientists, policymakers, and academics from all over the world—have collaboratively advanced solutions like the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and long-term aspirational goals. When we embrace different viewpoints, we are better equipped to innovate responsibly and inclusively.

6. Are there any sustainability initiatives or projects in aviation that particularly inspire you or that you’ve been involved in?

Maria Vittoria Corazza: If we consider the equation **“more gender parity=improved inclusion=increased**

sustainability” I think the first highly inspirational cases that come to my mind are the United Airlines’ Aviate Academy to have least half of the pilot trainees women, the Jazz Airline’s policy to support diversity and inclusion, leading to a multi-faith space at one of the company location, the IATA’s 25by2025 initiative to increase female representation in senior roles by 25%. There are many more, of course, and they are never enough, but it tells a lot on the march that has started and that is not stopping. As an academician, I also see of the utmost importance all the initiatives supporting women in STEM disciplines and study programs and I am involved in a research proposal at my university on this very topic.

Jane Hupe: One initiative that has inspired me is the development of Sustainable Aviation Fuels (SAF). I have been fortunate enough to be involved in projects that explore the potential of SAF to significantly reduce aviation’s carbon footprint. Additionally, I have found great inspiration in the work being done to integrate environmental goals into long-term planning within ICAO and by Member States. For instance, the collective commitment to achieve net-zero carbon emissions by 2050, supported by initiatives like the ICAO Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF) programme, is a major step forward. These kinds of multilateral efforts, grounded in both technological innovation and international cooperation, give me hope for the future of sustainable aviation.

7. What steps can the industry take to foster more inclusive leadership in environmental and technical fields?

Maria Vittoria Corazza: I agree with Milena Bowman, at EUROCONTROL, when she says that sustainable aviation relies on three Ps – people, planet and profit. Thus, **having women in leading roles** managing staff, operations, environmental policies as consolidate positions in the aviation corporate culture is certainly a necessary step in this path.

Jane Hupe: Building inclusive leadership starts with creating pathways—educational, professional, and institutional—for underrepresented groups to enter and thrive in aviation. The industry can strengthen mentorship programs, invest in gender-responsive leadership training, and embed diversity goals in recruitment and promotion strategies. Technical

fields in particular need to be demystified and made more accessible, especially for young women and professionals from regions with fewer opportunities. From an institutional point of view, decision-making bodies need to be intentional about whose voices are heard. Inclusion should not be an afterthought; it must be embedded in how we define excellence, how we reward performance, and how we lead teams. Creating inclusive cultures in environmental and technical areas can unlock both talent and trust.

Looking Ahead

8. What advice would you give to young professionals interested in aviation and sustainability?

Maria Vittoria Corazza: There can be many advices. The aviation industry needs not just brilliant engineers or passionate environmentalists, but both. So my first advice would be to **embrace both technology and environment with the same passion**: be a skilled aviation professional but also an innovator reshaping aviation’s future through the environmentally conscious lens, from electric flight to sustainable fuel, greener airport operations, and circular supply chains. This introduces the second advice: **Seek interdisciplinary strength**. As emerging women leaders in aviation and sustainability, cultivating interdisciplinary expertise is essential; meaningful innovation often arises where technical proficiency intersects with policy insight, data literacy, environmental issues and systems thinking. So, do not just focus on engineering or environmental science in isolation, since the real breakthroughs happen where disciplines collide. To achieve this, study and read widely (everything, from academic journals, industry white papers, climate policy briefs, to tech blogs). But stay critical too, because often some voices are missing from the mainstream narrative.

Jane Hupe: I would encourage young professionals to embrace the duality of ambition and patience. The aviation sector is undergoing a profound transformation, but systemic change takes time. Be bold in your vision, but also patient in the process. Stay informed, stay connected, and never stop learning—especially across disciplines. Sustainability in aviation touches everything from engineering to economics to ethics, so interdisciplinary curiosity is your best ally. Also, seek out mentors and networks that challenge and support you. Finally, remember

that your voice matters. The next generation of aviation professionals will define what kind of industry we become—greener, more equitable, and more resilient.

9. How can organizations like ICAO create more opportunities for diverse voices in environmental policymaking and research?

Maria Vittoria Corazza: First, **by creating more constant, inclusive research funding mechanisms.** This can be done by regularly launching targeted grants or fellowships for specific researchers (young professionals, and women in STEM, especially those directly affected by the lack of environmental policies) and areas (underrepresented regions, indigenous or marginalized communities, small island states to study the environmental impacts of aviation and propose localized solutions). This can be complemented by supporting interdisciplinary, community-engaged research that includes voices not typically present in technical discourse (e.g., climate justice advocates or youth climate groups).

This can also include **mentored policy fellowships for women, youth, and professionals from diverse backgrounds** to work within ICAO's environmental units. Indeed, mentorship is certainly one more avenue to explore: women who are pushing boundaries in sustainable aviation, climate tech, aerospace policy, or corporate culture can be part of structured mentorship programs that matches early-career women professionals with mid-career or senior women mentors in aviation and sustainability fields. This should be global and inclusive, with attention to gender balance, cultural context, and regional representation.

One more opportunity could be to expand the on-going ICAO initiatives (for example the Next Generation of Aviation Professionals, NGAP) to include specific tracks on environmental policy, climate resilience, and sustainable aviation technologies.

For what strictly concerns policymaking, one opportunity could be to liaise with regional aviation bodies, universities, and NGOs that work closely with underrepresented groups to co-create dedicated policy recommendations.

Jane Hupe: ICAO can continue to lead by example in broadening participation in its environmental work. This

means not only expanding technical assistance and training for underrepresented States but also ensuring diverse representation in expert panels, working groups, and leadership positions. One powerful step is investing in youth engagement and capacity-building through initiatives like NGAP and ACT-SAF, but with a more targeted inclusion strategy—bringing in young women, professionals from small island developing States, and voices from indigenous and marginalized communities. There is also room to support academic partnerships and research fellowships that prioritize inclusive and regionally relevant environmental topics. Diversity in policymaking is not just about fairness—it improves the quality and reach of the outcomes we deliver.

10. What is your vision for a more inclusive and sustainable aviation industry over the next decade?

Maria Vittoria Corazza: Good question! Over the next ten years, the vision for a more inclusive and sustainable aviation industry centers on transformative change, **where environmental responsibility, social equity, and innovation are not just parallel goals, but deeply interconnected priorities.** Thus, aviation's future will be defined not just by how it flies, but by whom it serves. On the one hand, this means that, specifically for the industry, innovations in the field of net-zero emissions through sustainable fuels, electrification, and cleaner infrastructure, embedding sustainability into core business models, shall consolidate and become regular operations. On the other hand, the challenge will be in creating full inclusive environments, and this can happen only by advancing women and underrepresented professionals in technical and executive roles, fostering diverse innovation.

I would love to see in the next decade aircraft where women and diverse voices take the cockpit, so inclusion and equity take flight!

Jane Hupe: My vision for the next decade is one where aviation is not only environmentally sustainable but also a sector that provides equal opportunities for all. I see a future where the industry leads in green technologies and has a diverse workforce in leadership roles, shaping the future of aviation. By making sustainability and diversity central to the industry's goals, we can ensure that aviation continues to grow responsibly and inclusively.