

"There has never been a more urgent need to restore damaged ecosystems than now"

> UN Declaration on Ecosystem Restoration 2021-2030

# Connect. Inspire. Collaborate.

The 24hr Sustainable Hospitality Hackathon Vol. III: Regeneration Now is organized and presented by the IU International University of Applied Sciences (DE), the Hotel Management School Maastricht (NL), the Ecole Hôtelière de Lausanne (CH) and the Julius Maximilians University of Würzburg (DE).

#### **Leading Question:**

Under the regeneration umbrella, what actions must be undertaken by hotels, restaurants and related businesses involved in the tourism value chain to restore ecosystems and contribute to the Sustainable Development Goals?

#### **Report Sections**

- 1. The Stage
- 2. The Frameworks
- 3. The Task
- 4. The Topics
- 5. The Experts
  - 1 Marina Laurent, Founder, REGEN Regenerative Hospitality Solutions
  - 2 Frans Melissen, Professor of Sustainable Experience Design, Breda University of Applied Sciences, Professor of Management Education for Sustainability, Antwerp Management School.
  - 3 **Delphine Malleret King**, Chief Executive Officer, The Long Run
  - 4 Kyriaki Glyptou, Senior Lecturer, School of Events, Tourism and Hospitality Management, Leeds Beckett University, United Kingdom
  - 5 Frauke Fischer, Founder, Agentur Auf!
  - 6 Nicolas Dubrocard, Director, Solutions Tourism
  - Vincent Gerards, General Manager, Phuket Elephant Sanctuary
  - 8 Amanda Ho, Co-Founder, Regenerative Travel
  - 9 Julia Rawlins, Country Lead Germany, Linking Tourism & Conservation (LT&C)
  - **10** Daan Bleichrodt, Chief Tree Planting Officer, IVN environmental education
- 6. The Highlights
- 7. The Conclusion
- 8. The Organisers









# 1. The Stage

The yearly World Economic Global Risk Report has listed 'climate action failure' as the top risk with regards to impact since 2013 (WEF, 2021) and biodiversity loss within the top 5 risks, in terms of impact and likelihood (WEF, 2021). The 2021 600-pages Dasgupta Review on The Economics of Biodiversity has a clear message: over the past two decades, we have witnessed a 40% drop in natural capital per person (Dasgupta, 2021). In the words of The Guardian's economic editor, this is really "capitalism for dummies, because any company that was as cavalier about its inventories of all other forms of capital – its machines, its IT systems, its buildings and its people – would soon go out of business" (Elliott, 2021, para 3). Ahead of the UN COP26, a series of breakthroughs can be observed in terms of climate actions. However, the hospitality industry and the hotel sector in particular has the enormous task of decarbonizing a building stock of more than 500,000+ hotels worldwide and with a still strong hotel pipeline - nature may be our best ally. Nature and its ecosystem services are at the centre of the hospitality value proposition: from food and beverage offers to guests' enjoyment of natural landscape at a destination. Nature is not only a 'capital' component available to businesses, but a source of solutions to mitigate and adapt to climate change and support biodiversity while ensuring the well-being of staff and guests alike. From forests to farmlands, mountains, grasslands and urban environments, biodiversity and ecosystem services are at the centre of the tourism and hospitality business proposition.

On June 2-3, 2021, 90 students from four universities along with two dozen experts and lecturers invested 24 hours to connect and collaborate on developing hands-on solutions for ecosystem restoration in the tourism value chain. The goal is to create actionable plans and activities considering the overall opportunity (and responsibility) towards more sustainability in the industry (and not less) in a post COVID-19 world.

### 2. The Frameworks

The adoption of the 2030 Agenda for Sustainable Development along with the Sustainable Development Goals and the United Nations Declaration on Ecosystem Restoration provide the frameworks in tackling the major challenges faced by the tourism and hospitality industry.

## 3. The Task

23 ecosystem restoration and SDG challenges were established. Each group, comprising of 3 to 4 students, identified one (1) specific problem (P) associated with the given topic and provided up to three (3) solutions or activities (S1, S2, S3) the group sees the tourism and hospitality industry [can] undertake to tackle the identified problem. The solutions provided were then classified into either short- (within 12 months), medium- (12-60 months), or long-term (until 2030). Finally, details of resources (tangible and intangible) are listed to achieve the task with supporting research.









# 4. The Topics

- 1. Farmlands focus on gastronomy/supply chain / rural support (UN Declaration on Ecosystem Restoration)
- 2. Forests focus on ecotourism / conservation / preservation (UN Declaration on Ecosystem Restoration, SDG 15)
- 3. Freshwaters focus on operation / supply chain /water management (UN Declaration on Ecosystem Restoration, SDG 14)
- 4. Grasslands, Shrublands and Savannahs focus on ecotourism / ecolodge development /conservation efforts (UN Declaration on Ecosystem Restoration, SDG 15)
- 5. Mountains focus on biodiversity protection choose geographical area (UN Declaration on Ecosystem Restoration, SDG 15)
- **6. Oceans and coasts** focus on hotel in beach/sea/island destinations / protection & restoration measures / supply chain (SDG14.2 – link to UN Declaration on Ecosystem Restoration)
- 7. Peatlands focus on conservation / restoration efforts choose geographical area (UN Declaration on Ecosystem Restoration, SDG 15)
- 8. Urban Areas focus on nature-based solutions for hotels in urban setting choose geographical area (UN Declaration on Ecosystem Restoration)
- **9. Poverty reduction** Hospitality as poverty reduction actor / focus on low income countries (SDG1.4)
- 10. Zero hunger focus on gastronomy/supply chain/local Farming (SDG2.3 link to UN Declaration on Ecosystem Restoration)
- **11. Health and well-being** focus on hospitality operations (SDG3.5)
- **12. Gender equality** focus on the role of women in hospitality / (SDG5.5)
- **13. Clean water** focus on freshwater use/mgmt. & wastewater management (SDG6.4 link to UN Declaration on Ecosystem Restoration)
- 14. Affordable & clean energy focus on renewable energy production on-, off site (SDG7.2)
- **15. Affordable & clean energy** focus on carbon neutral hotel construction (SDG7.3)
- 16. Decent work & Economic growth focus on bridging technologies and labour insensitivity of hotel sector (SDG8.2)
- 17. Innovation & infrastructure focus on current hotel supply / building innovations (SDG9.4)
- **18. Reduced inequalities** focus on low income countries (SDG10.2)
- 19. Sustainable communities focus on role and responsibilities of hotels (SDG11.4)
- **20. Responsible consumption** focus on food waste (SDG12.3)
- **21. Responsible consumption** focus on waste management (SDG12.5)
- 22. Climate action focus on knowledge dissemination around decarbonisation (SDG13.3)
- 23. Peace & Partnerships focus on stakeholder relationship (hotels/restaurants) (SDG16 / SDG17)









# 5. The Experts

Experts, from renowned biologists to engaged hospitality entrepreneurs and consultants were called to join and provide input on regeneration ecosystem services, biodiversity, and the SDGs. In a Snapshot:

**1 Marina Laurent,** Founder, REGEN – Regenerative Hospitality Solutions

Under the title 'Why Regeneration Now', Laurent kick-started the 24hr hackathon with a presentation on the journey we all need to make towards reconnection. This involved owning our impact, redefining success and rethinking leadership. And, in the words of Laurent, "to inspire we need brave leaders who are willing to embrace uncertainty, leaders who have the courage and the confidence to show that we don't know what will come in the future".

**2 Frans Melissen**, Professor of Sustainable Experience Design, Breda University of Applied Sciences, Professor of Management Education for Sustainability, Antwerp Management School.

With the title 'Sustainability and the SDGs a match made in heaven or hell?' Melissen critically reviewed the sustainable development goals by looking at the footprint associated with high performance on the SDGs. Melissen discussed that the current focus on economic growth and material wealth is the root of the problem society needs to tackle now, thus arguing that "we need to get away from the old system and its patterns in order to create a new system".

## 3 Delphine Malleret King, Chief Executive Officer, The Long Run

Malleret King provided the audience with an example of regeneration on the ground with her talk on 'Regeneration and Tourism in Practice: The Long Run'. The Long Run is a membership organization of nature-based tourism businesses committed to driving sustainability through the active conservation of biodiversity. Discussing The Long Run 4Cs (conservation, community, culture and commerce), Malleret King emphasized that "In biodiversity lies resilience and life" and that 'the long term' means "Longevity: What happens after? What are you aiming for in 100 years? What do you want to see? How does it stay with the next generation and the next".









4 **Kyriaki Glyptou**, Senior Lecturer, School of Events, Tourism and Hospitality Management, Leeds Beckett University, United Kingdom

Dr Glyptou dived into the 'The Jigsaw Puzzle of SDGs and Metrics' and discussed how the tourism and hospitality industry is still perplexed around the full affinity of their operations to the SDG Targets. There is a need for relevant industry-specific metrics to monitor the exact contribution of the industry and to quide medium-longer term transitions towards the SDGs". In doing so Glyptou argued to "focus on the details but never miss the bigger picture".

### Frauke Fischer, Founder, Agentur Auf!

Closing the first day, Dr. Fischer presented 'The Business Case for Biodiversity'. Following a review of the basic terms around biodiversity and ecosystem services, Fischer presented some of the distressing facts about the sixth mass extinction and argued that, considering the value of biodiversity (including economic) "we have to fear to go biologically bankrupt!". With the case of PERÙ PURO, Fischer explained the computability between protection and enhancement of biodiversity, farming and business.

#### 6 Nicolas Dubrocard, Director, Solutions Tourism

Dubrocard created standards for Asian elephant camps (Asian Captive Elephant Standards - ACES) and certifies businesses in Bali, Laos and Thailand. With the title 'Animal Welfare & Tourism', Dubrocard reviewed the five freedoms (Freedom from hunger/thirst, good housing, freedom from pain, injury or disease, freedom to express normal behaviour, freedom from fear and distress) and summarized: "Elephant welfare – what is it? It is about available space, good water, food quantity and diversity and adapted control".

### **Vincent Gerards**, General Manager, Phuket Elephant Sanctuary

Joining the panel with Dubrocard, Vincent Gerards provided the audience with a hands-on explanation of the elephant rescuing process and operation at a sanctuary, pointing out that "if a natural environment is not existing anymore – then we build an environment for them". Currently, the sanctuary provides safe and ample lush tropical space for 12 elephants.









### 8 Amanda Ho, Co-Founder, Regenerative Travel

During the presentation by Ho, with the title 'Regenerative Travel: Where your vacation meets your values', it was emphasized that regenerative travel is about creating better conditions of life for the environment and for the community. As Ho pointed out, "from a regenerative perspective, we focus on the entire ecosystem, both human and environmental, and how all of the parts are connected through whole systems thinking". At the same time, Ho accentuated the need for transparency on the environmental and social impact. Ho reported: "We are now collecting 29 data points across all of our members' hotels to help our properties track their progress on environmental data as well as social data. Each of our hotels are reporting these metrics so we can track all of our members' progress and help them further their commitment to creating a regenerative impact".

### 9 Julia Rawlins, Country Lead Germany, Linking Tourism & Conservation (LT&C)

Picking up from the previous keynote, Rawlins further emphasized the importance of creating bonds and nurturing cooperation in her talk on 'Why unusual alliances are key - examples from **Linking Tourism & Conservation'**. This collaboration between stakeholders is needed to support protected areas and global biodiversity targets and as Rawlins reinforced, this is "a call to action: Seek inspiration from others & join a relevant group/network; Talk (and listen) to different people and; Learn from nature".

### 10 Daan Bleichrodt, Chief Tree Planting Officer, IVN environmental education

The closing keynote 'Tiny Forest, Big Impact' by Daan Bleichrodt showed how to put the call of action as presented by Rawlins into practice with a simple mission: to reconnect people to nature. And to do so, Bleichrodt leads the Tiny Forest program in the Netherlands which has shown tremendous success in nature regeneration in urban areas, whether one looks at carbon sequestration, reduced urban island heat effect or increased animal and plant species. More than that however, Bleichrodt concluded that "a Tiny Forest is not only about the nature itself, it is about the connection between kids and nature, between communities and nature and between kids and communities".

## 6. The Highlights

A list of 70 regeneration actions and activities to be undertaken by the hospitality industry have been proposed over the 23 topics. All recommended activities required support in form of evidence from practice or scientific research. The highlights of each topic researched are presented in Table 1. 24hr Sustainable Hospitality Hackathon Vol. III Highlights.









Table 1. 24hr Sustainable Hospitality Hackathon Vol. III Highlights

		Solutions / Actions	
Topics	Problem Identification	Solutions / Actions	Students
1. Farmlands focus on gastronomy/supply chain / rural support (UN Declaration on Ecosystem Restoration)	Steep decline in farmable land due to human-caused erosion and pollution	(Summary)  (S1) Reduce food waste, work towards circularity! (S2) Purchase from local suppliers and promote local cuisine in hotels (S3) Changing people's mindset from meat and dairy products to plant-based food	Amelie van den Akker, (HMSM) Aneliya Antova, (IU) Jannick Hendriks, (HMSM) Lukian Bottke, (JMU)
2. Forest focus on ecotourism / conservation / preservation (UN Declaration on Ecosystem Restoration, SDG 15)	Deforestation and forest degradation	(S1) Engage tourists in local forest flora and fauna, show and explain threats (2) Promotion of sustainable products and services from forests (S3) Offering plant-based alternatives to animal products	Amber Beijers (HMSM), Charlotte Hendrikx (HMSM), Lisa Bacherle (JMU), Malte Arps (JMU)
3. Freshwaters focus on operation / supply chain /water management (UN Declaration on Ecosystem Restoration, SDG 14)	Excessive freshwater usage from hotels and resorts	(S1) Investing in filtering and rainwater harvesting installations (S2) Endorsing guests to use less water by awarding points on their membership for reducing water consumption (S3) Installing water saving devices across all hotels	Fleur Blok, (HMSM), Riangelo Servanie, (HMSM), Koen Hoppener, (HMSM),
4. Grasslands, Shrublands and Savannahs focus on ecotourism / ecolodge development /conservation efforts (UN Declaration on Ecosystem Restoration, SDG 15)	Desertification of Grasslands, Shrublands and Savannahs due to biodiversity loss	(S1) Nomad Pastoralism to Revive Grasslands in partnership with eco-lodges (S2) 'Plantality', a planting programme to tackle the deforestation and the desertification of grasslands with guest involvement (S3) The lodge welcomes locals to take part in the safari drives/walks	Charis Fuchs (IU) Iris Boekel (HMSM) Nienke du Preez (IU) Sam van Gestel (HMSM)
5. Mountains focus on biodiversity protection choose geographical area (UN Declaration on Ecosystem Restoration, SDG 15)	Many global mountain areas experiencing deforestation	(S1) Adopting a forest via financial support and physical participation (2) Work closely with local communities of the mountains to promote forests as a tourist attraction (S3) Incorporate conservational activities into the tours and recreational activities in the mountain resorts and destinations	Rishi Sayanthakumar (JMU) Marijn de Jong (HMSM) Uliana Soldatkina (HMSM) Jitske Boomars (HMSM)
6. Oceans and coasts focus on hotel in beach/sea/island destinations / protection & restoration measures / supply chain (SDG14.2 – link to UN Declaration on Ecosystem Restoration)	Lack of awareness of the impact caused by the fishing industry on biodiversity, organisms and climate change	(S1) Review menu and include many vegetarian options (S2) Develop projects, games, documentaries, trips, or even special subjects as educational tool on the topic of ocean and fisheries (S3) Create awareness by engaging with stakeholders on trainings and workshops	Fabian Watzl (JMU) Puck Braams (HMSM) Veronique Joustra (HMSM)







7. Peatlands focus on conservation / restoration efforts - choose geographical area (UN Declaration on Ecosystem Restoration, SDG 15)	Draining peatlands harms the environment	(S1) For hotel properties located close to peatlands, share experience and expertise to raise awareness on peatland conservation, restoration and improved management (S2) Encourage and support local communities to find alternatives for building projects (3) Protecting and restoring peatlands with targeted financial support	Claire Brévier (HMSM), Djoeke Keijzer (HMSM), Annika Schäfer (HMSM), Marijn van Immerzeel (HMSM)
8. Urban Areas focus on nature-based solutions for hotels in urban setting - choose geographical area (UN Declaration on Ecosystem Restoration)	Excessive usage of energy and water in urban ecosystems	(S1) Bikes are the way to go! Bike rental system for guests and support for staff (2) Rainwater harvesting and water reuse (S3) Implement green spaces such as living walls and rooftop gardens	Tim Brul (HMSM) Rob Kalmès (PXL) Senna Mann-Hulsken (HMSM) Charlotte Eschweiler (IU)
9. Poverty reduction Hospitality as poverty reduction actor / focus on low income countries (SDG1.4)	The number of people who are living in extreme poverty globally has declined since the 1990s, however COVID-19 threatens this trend	(S1) Internal Empowerment: training and development to grow within a hotel company (S2) Local support: Build a short supply chain and work with local suppliers (S3) Fight marginalization by actively including marginalized communities in decision making	Dominique van Buchem (HMSM), Sofia Wohak Jimenez (IU), Amy Kitchiner (HMSM)
10. Zero hunger focus on gastronomy/supply chain/local Farming (SDG2.3 – link to UN Declaration on Ecosystem Restoration)	Ensuring that via tourism growth and newly built hotels, the local population will profit as well, elevating their living conditions	(S1) Using the case of Madagascar: Hotels to buy the food from the local shops, people, and farmers (S2) Support transportation infrastructure development so that local farmers have access to the market (S3) Support water infrastructure development	Maud van Buren (HMSM), Ben Steppert (JMU), Rick van Knippenberg (HMSM)
11. Health and well-being focus on hospitality operations (SDG3.5)	The abuse of narcotic drugs and alcohol in hospitality	(S1) Create an alcohol-free day at the hotel/restaurant (S2) Provide empty hotel rooms for free for victims of violence caused by excessive alcohol or drug use	Tim Doezé (HMSM), Robin de Kluizenaar (HMSM), Mihnea Stratulat (HMSM)







12. Gender equality focus on the role of women in hospitality / (SDG5.5)	The lack of women in managerial / board functions within the hospitality industry	(S1) Develop an association where hotel chains worldwide must set a certain quota on hiring a specific percentage of women in top management within their hotels (S2) Support campaigns to destigmatize the role of women within the family in households (S3) Develop training programs to encourage knowledge development to qualify for managerial positions.	Doortje Donkers (HMSM), Elina Gibert (IU), Sadean Suheimat, (HMSM)
13. Clean water focus on freshwater use/mgmt. & wastewater management (SDG6.4 – link to UN Declaration on Ecosystem Restoration)	Substantially reduce the number of people suffering from water scarcity	(S1) Water reducing strategy via efficient fixtures in hotels (S2) Gamification: a race competition comparing the amount of water saved by each guest in the duration of their stay (S3) The water integrating system via Hydraloop	Axel Neigefindt (IU), Jack Drysdale (HMSM), Liza Mans (HMSM), Anouschka Tielemans (HMSM),
14. Affordable & clean energy focus on renewable energy production on-, off site (SDG7.2)	Excessive use of energy	(S1) Reduce the amount of municipal solid waste needing treatment (S2) Consider micro-hydro power production (depending on location) (S3) Source energy from biomass	Anne Mees (HMSM), Emma Vellekoop (HMSM), Julia van Egmond (HMSM)
15. Affordable & clean energy focus on carbon neutral hotel construction (SDG7.3)	Implementing affordable and clean energy solutions in hotels	(S1) Implement all low-hanging fruits in terms of technologies (e.g. LED, keycard, occupancy sensors etc.) (S2) Source renewable energy (e.g. solar, wind, water) (S3) Invest in renewable energy production (e.g. solar, wind, sater)	Aukje Mulder (HMSM), Eva van Eijk (HMSM), Stan van Wijk (HMSM), Isis van Velsen (HMSM)
16. Decent work & Economic growth focus on bridging technologies and labour insensitivity of hotel sector (SDG8.2)	Working in the hotel industry can be both physically and mentally too intensive	(S1) Using a Housekeeping App indicating the level of cleaning duties to be accomplished in each room (S2) Employees are equipped with a GPS security system to alert when confronted with a difficult situation (S3) Using sensors to detect stress levels in employees and take corrective actions	Puck Mulkens (HMSM), Jip van Empelen (HMSM), Denise van Venrooij (HMSM)
17. Innovation & infrastructure focus on current hotel supply / building innovations (SDG9.4)	Lack of access to the Internet and electricity in developing countries	(S1) Generate green energy through cycling (S2) Energy production via biomass production from the hotel waste stream (S3) Provide hotel hotspot to neighbouring communities	Isa Flaskamp (HMSM), Ezra Vermazen (HMSM), Julian Noordzij (HMSM), Ilona Wateler (HMSM)









18. Reduced inequalities focus on low income countries (SDG10.2)	Reducing income inequality in developing countries	(S1) Hotels partner up with local schools and pay for the education of the children of their employees (S2) Sponsor study material and internet access for local schools (S3) Create long-term partnership to offer entry positions and work opportunities	Kiki van de Pas (HMSM), Wouter Vlas (HMSM), Ylse de Galan (HMSM)
19. Sustainable communities focus on role and responsibilities of hotels (SDG11.4))	There is a common clash between hospitality establishments and the natural and cultural surroundings of their host community	(S1) Raise cultural awareness via cultural training (S2) Keeping close contact with local partnerships by integrating local food suppliers for restaurants, and leveraging local partnerships (S3) Implement a hotel design using materials that merge with the local aesthetic and have a minimal environmental impact	Sophie Wasbauer (HMSM), Zoë Pauwels (HMSM, Merel Vosters (HMSM, Francesca Lizzio (EHL)
20. Responsible consumption focus on food waste (SDG12.3)	Most of the food is not produced and consumed in a sustainable way	(S1) Create left over food packages for tourists or travellers (S2) Menu card consisting of similar ingredients (S3) Implement Too good to go Application 'worldwide'	Valerie Grasveld (HMSM), Myrthe Peters (HMSM), Laura Wagner (HMSM)
21. Responsible consumption focus on waste management (SDG12.5)	Solid waste results in air pollution, water pollution and soil pollution	(S1) Install a waste composter (S2) Implement a recycling programme (S3) Consider waste-to-energy	Sietske de Groot (HMSM), Pia von Putbus (HMSM), Marta Roccatagliata (HMSM), Luuk Heijlaerts (HMSM))
22. Climate action focus on knowledge dissemination around decarbonization (SDG13.3)	Shortage of knowledge & actions undertaken regarding decarbonization	(S1) Spread knowledge and awareness by educating your employees and guests (S2) Implementing an eco-label to support sustainability in marketing the property (S3) Join the Sustainable Hospitality Alliance	Ties van den Ham (HMSM), Isa Schaaders (HMSM), Thijs van de Weg (HMSM)
23. Peace & Partnerships focus on stakeholder relationship (hotels/restaurants) (SDG16 / SDG17)	There is still inequality between large groups of people, which is supported by modern day society	(S1) Support crime reduction strategies in your community (S2) Provide financial advisory services to employees (S3) Obtain Fairtrade supplies	Tom de Ruijter (HMSM), Sophie Seldis (HMSM), Hannah Slabber (HMSM)









### 7. Conclusion

Setting the stage for the third edition of the 24hr Sustainable Hospitality Hackathon was the imperative for the hospitality industry to bounce forward rather than to return to pre-pandemic modes of operation. Governments are increasingly aligning policies towards a carbon neutral future and advances in technologies are making renewable energy cheaper to produce. However, against this backdrop, the ongoing sixth mass extinction gives pause for thought. While there are serious possibilities in bending the carbon emissions curve over the next 10 years, extinction of fauna and flora is irreversible. So what can we do? The hospitality industry is active across all ecosystems, from greening urban areas, rewilding gardens and cleaning up our rivers, it plays a very important role in society and communities, so it is equally about individual actions as it is civic duty as it is a business responsibility. One of the main outcomes of this hackathon is the general understanding that the viable pathway forward is transformation. Aligned in the regeneration context, it is, fundamentally, a radical shift in the value system. To quote the American architect and systems theorist Buckminster Fuller:

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."

# 8. The Organisers

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