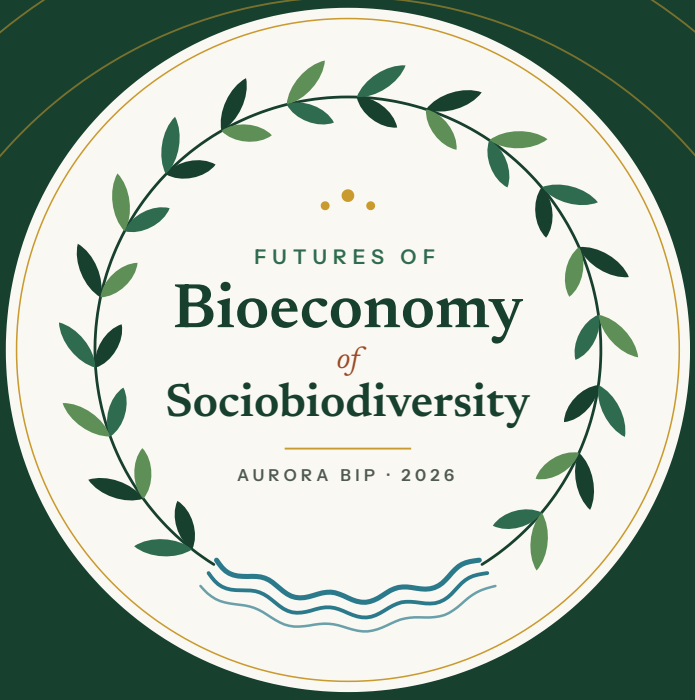


Futures of Bioeconomy of Sociobiodiversity

Social innovation, futures literacy and the Amazon

Online, 20 October · Université Paris-Est Créteil, 26–30 October 2026

UPEC | AEI INTERNATIONAL SCHOOL

unesco Chair FUTURES of Education for Health and Living Well

Università degli Studi di Napoli Federico II

CBS COPENHAGEN BUSINESS SCHOOL

AURORA

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ABOUT THIS REPORT

This report documents the Aurora Blended Intensive Programme *Futures of Bioeconomy of Sociobiodiversity*, held online on 20 October and at Université Paris-Est Créteil from 26 to 30 October 2026.

It is written from what the week produced: lecture slides, scenarios, posters drawn by hand, design canvases, peer assessments, photographs and the four final projects. It follows the order in which the students met these materials, so that the reader can see how their questions changed from Monday to Friday.

It is addressed to the partner universities, to the Aurora alliance, to our colleagues in Brazil, and to anyone who wonders what a short international programme can do with a subject as vast as the Amazon.

COLOPHON

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"The goal of looking to the future is to disrupt the present."

Gaston Berger, philosopher and founder of French prospective

FOREWORD

A week to ask *better questions*

This programme follows the International Immersive School in Amazonian Sociobioeconomy, which UPEC and the Universidade Federal do Pará ran in Belém and Santarém in September 2026.



Monday 26 October, late morning: the group crosses the Créteil campus on its way to the first session.

The school was created for students of UPEC enrolled in the Master in Management and International Trade – Latin America (Brazil option), taught at the AEI International School. For eleven days, they travelled the rivers of Pará with students from UFPA, the Universidade Federal do Oeste do Pará and the Université de Guyane. They came back with photographs, field notebooks and a question that stayed with all of us: what can a European university do with what it learns in the Amazon once it is back home?

The Blended Intensive Programme was one answer, and it opened the question to the Aurora alliance. For a week, sixteen students from four universities of the Aurora alliance (Federico II in Naples, Palacký in Olomouc, Copenhagen Business School and the University of Iceland) worked in Créteil on the futures of the bioeconomy of sociobiodiversity: an economy that depends on the forest standing, on the knowledge of the peoples who live in it, and on a fair share of the value it creates.

Distance was part of the subject. Amazonian products are sold a few metro stops from Créteil, as the students saw at the Salon du Chocolat, and many decisions about the forest are taken far from it, by people who imagine it from elsewhere. Working on those images is the purpose of futures literacy, which ran through the whole week.

A week in Créteil leaves no time to go to the Amazon. It leaves enough time to learn to ask better questions about it: who creates the value, who decides, who pays, and whose future is being designed. The four projects presented on Friday 30 October carry those questions, each in its own way.

I am grateful to Isabel Fróes, Ramon Rispoli and Benedetta Toledo, who built this programme with me; to José Augusto Lacerda Fernandes and Lívia Torres, who brought the Amazon into the room; to the students of UPEC who shared their field experience; to Giorgio Cristofani, doctoral candidate in the SEIZMIC Marie Skłodowska-Curie Doctoral Network, who supported the organisation of the whole programme; and to Lyes Makhlouf and the international relations teams of our universities, who made the mobility possible. Above all, I thank the sixteen students: this report is made of their work.

Felipe Koch

Vice-President for International Relations and Strategy, Université Paris-Est Créteil
Holder of the UNESCO Chair Futures of Education for Health and Living Well
Coordinator of the Blended Intensive Programme, AEI International School

THE PROGRAMME AT A GLANCE

One online session, five days, *four projects*

16

students, Bachelor and Master levels, from four Aurora universities

6

contributors from UPEC, Copenhagen Business School, Federico II, UFPA and Embrapa

1 + 5

an online lecture on 20 October, then five days on site in Créteil

4

international teams, each with four students from three universities

4 × 3

deliverables per team: an A0 poster, a video of up to three minutes, a public presentation

4

ECTS credits, under the Erasmus+ Blended Intensive Programme format

WHERE THE STUDENTS CAME FROM



- 8 — Università degli Studi di Napoli Federico II, Italy
- 4 — Palacký University Olomouc, Czechia
- 3 — Copenhagen Business School, Denmark
- 1 — University of Iceland

THE FORMAT

A Blended Intensive Programme combines a short virtual component with a week of physical mobility. Here, the virtual part was a lecture on bioeconomy and sustainability, given online a week before arrival, together with the design brief for the projects. The week in Créteil alternated lectures, workshops, a visit and team work, in English, with Bachelor and Master students working side by side.

The programme was organised by the UNESCO Chair Futures of Education for Health and Living Well at the AEI International School of UPEC, with Università degli Studi di Napoli Federico II and Copenhagen Business School, and with invited contributors from the Universidade Federal do Pará and Embrapa, the Brazilian Agricultural Research Corporation. Giorgio Cristofani, doctoral candidate in the SEIZMIC Marie Skłodowska-Curie Doctoral Network, supported the organisation throughout.

WHO TAUGHT

Felipe Koch, UPEC · coordination, Futures Literacy Laboratory

Isabel Fróes, Copenhagen Business School · bioeconomy and sustainability

José Augusto Lacerda Fernandes, UFPA · social innovation in the Amazon

Lívia Torres, Embrapa · scenarios for the Amazonian bioeconomy

Ramon Rispoli, Federico II · rethinking the city through food

Benedetta Toledo, Federico II · micro-hackathon and design sprint



Monday 26 October: the four groups at work during the Futures Literacy Laboratory.

CONTEXT

Why sociobiodiversity, *and why from Créteil*

The word bioeconomy circulates in strategies, funding calls and corporate reports. It can describe a pharmaceutical laboratory, a biomass plant or a cooperative of açaí harvesters. The programme chose the narrowest and most demanding of its meanings.

In Brazil, the notion of sociobiodiversity links biological diversity to the knowledge, practices and ways of life of the peoples who live with it: Indigenous peoples, quilombola communities, riverside populations, extractivists and family farmers. A bioeconomy of sociobiodiversity is an economy in which the forest is worth more standing than cleared, and in which those who keep it standing receive a fair share of what it produces. It is also an economy in which knowledge, consent and benefits cannot be separated.

The subject reached the centre of the international agenda when Belém hosted the United Nations climate conference, COP30, in November 2025. It is also at the heart of a cooperation that UPEC has built over several years with the Universidade Federal do Pará. In September 2026, the two universities ran the first International Immersive School in Amazonian Sociobioeconomy, in Belém and Santarém, with the Universidade Federal do Oeste do Pará and the participation of the Université de Guyane. Created for students of UPEC in the Master in Management and International Trade – Latin America (Brazil option), the school took them for eleven days between classrooms, rivers and communities. The Blended Intensive Programme is its sequel in Europe.

The Blended Intensive Programme asked what happens on the other side of that relationship. Most of what Europe knows about the Amazon arrives as images, products and data. Most decisions that affect the forest, from trade rules to consumer habits, are taken far from it. A week in Créteil could not replace the field. It could train students to see the assumptions they carry about a place they have never visited, and to design with those assumptions in view.

The programme also continues UPEC's contribution to Aurora's Task Team 4.3 SSTC, dedicated to South–South and triangular cooperation on food systems and climate change, and the work of the UNESCO Chair Futures of Education for Health and Living Well, whose method, futures literacy, treats the future as a capacity to be exercised rather than a forecast to be produced.

THREE WORDS USED THROUGHOUT

Sociobiodiversity · the bond between biological diversity and the knowledge, practices and livelihoods of the peoples who live with it.

Futures literacy · the capacity to understand why and how we use the future, developed by UNESCO through laboratories that bring anticipatory assumptions to the surface.

Value chain · the path a product follows from the forest to the consumer, and the way the money is shared along it.

DESIGN OF THE PROGRAMME

The architecture of the week

Each day added one layer to the same question. The students first framed the bioeconomy, then imagined the forest, met the territory, studied food systems and design, saw the market, and finally built their own projects.

20 OCT · ONLINE	MONDAY	TUESDAY	WED. MORNING	WED. AFTERNOON	THU–FRI
Frame	**Imagine**	**Ground**	**Design**	**Meet the market**	**Build**
Which bioeconomy?	Futures of forests, 2076 and 2126	The territory and four scenarios for 2040	Food systems and a design sprint	Salon du Chocolat, Paris	Posters, videos, presentations

ONE THREAD: MAKING ASSUMPTIONS VISIBLE

PROGRAMME

TUE 20 OCT online	14:00	**Bioeconomy and sustainability**, Isabel Fróes (Copenhagen Business School). The design brief for the projects is shared with the students.
MON 26 OCT	11:00	Welcome at the Créteil–Université metro station and on campus.
	afternoon	**Futures Literacy Laboratory: The Futures of Forests**, Felipe Koch (UPEC). Polak game, Reveal 2076, causal layered analysis of agriculture, Reframe 2126, Rethink.
TUE 27 OCT	morning	**Social innovation in the Amazon**, José Augusto Lacerda Fernandes (UFPA), followed by the testimonies of UPEC students back from the Immersive School.
	afternoon	**Scenarios for the Amazonian bioeconomy**, Lívia Torres (Embrapa): the BIAmazon 2040 case and a scenario exercise on Embrapa's strategy.
WED 28 OCT	morning	**Rethinking the city through food**, Ramon Rispoli, and **micro-hackathon: from challenges to project ideas**, Benedetta Toledo (Federico II).
	afternoon	Visit to the **Salon du Chocolat**, Paris, and meeting at the Cacau do Brasil stand.
THU 29 OCT	all day	Team work on the projects. Poster files sent for printing at 17:00.
FRI 30 OCT	from 10:00	Videos submitted at 10:00. Poster and video presentations from 11:00, then closing lunch.



Tuesday 27 October: the scenario exercise, with Embrapa's "ghost scenario" on every screen.

TUESDAY 20 OCTOBER · ONLINE

What kind of *bioeconomy?*

The programme opened a week before arrival, online, with a lecture by Isabel Fróes of Copenhagen Business School. Her first lesson was that the word itself is contested, and that choosing a definition is already choosing a future.

The bioeconomy has no single definition. Over two decades, the term has drifted from an ambition to ecologise the economy towards forms of biocapitalism in which living matter is one more input. Policy documents mix three visions: a bioeconomy of biotechnology, one of biomass, and one based on biodiversity. Each leads to very different landscapes and to very different winners.

Bio-based is a description of materials; sustainability is a claim about consequences, and the two are easily confused. More biomass can mean less biodiversity. Land is finite, and the footprint of a bioeconomy has to stay within the biocapacity of the planet, a limit to respect rather than a target to reach. Isabel Fróes showed that a majority of the national bioeconomy strategies she reviewed, 26 out of 41, are largely blind to the risks they create, and that coordination between countries rarely amounts to harmonisation.

For the Amazon, three things cannot be pulled apart: knowledge, consent and benefit-sharing. Expertise does not confer legitimacy on its own, and new value chains can reproduce old inequalities if they are designed without the people whose knowledge they use. Restoration crosses ecological, social, economic and political frontiers at once, and indicators such as GDP miss most of what matters here: biodiversity, wellbeing and equity.

She ended with five tests that any proposal should pass, and a warning that every proposal carries hidden assumptions about growth, technology and nature. The design brief was shared the same day. From the start, the students knew that they would end the week with a poster, a video and a presentation, and that these five tests would follow them to Friday.

VISION 1

Biotechnology

Value from laboratories, genes and patents.

VISION 2

Biomass

Value from replacing fossil inputs with crops and wood.

VISION 3 · THIS PROGRAMME

Biodiversity-based

Value from living ecosystems and the knowledge that keeps them.

SOCIOBIODIVERSITY

biodiversity × knowledge × practices × livelihoods

A product: remove one term and the whole falls to zero.

FIVE DESIGN TESTS

DEFINE · INCLUDE · GOVERN · INNOVATE · MEASURE

The “biodiversity-centred business test” proposed to the students for their projects.



MONDAY 26 OCTOBER · FUTURES LITERACY LABORATORY

“It's 2126. The forests can speak human languages. They manage humanity in unexpected ways. Humans have never been happier.”

The reframing scenario proposed to the students on Monday afternoon. Above, the four groups at work in the laboratory, with the title slide “The Futures of Forests” on every screen.

MONDAY 26 OCTOBER · FUTURES LITERACY LABORATORY

Imagining *the forest*

Before any talk of solutions, the week began with the images the students already carried. A Futures Literacy Laboratory, a method developed by UNESCO, asks participants to notice how they imagine the future, and why.

The laboratory, titled *The Futures of Forests*, opened with the Polak game, named after the Dutch sociologist Fred Polak. Participants place themselves in the room according to two questions: is the future likely to be better or worse, and can we influence it? In a few minutes, a group that shares the same programme discovers that it holds very different attitudes towards the future, and that these attitudes shape what each person is able to imagine.

In the first phase, **Reveal**, four groups described the forests of 2076: first the futures they consider probable, then those they would desire. A grid asked them to sort their ideas into positive and negative, visible and invisible, so that attitudes and power relations would appear next to technologies and landscapes. These first images are the raw material of the laboratory. They expose the anticipatory assumptions, the expectations taken for granted, with which each participant arrives.

Between this phase and the next, the students worked through a causal layered analysis of agriculture, the method proposed by the futurist Sohail Inayatullah. Starting from the headlines (record harvests and record deforestation in the same breath), the analysis moves down to the systems that keep them in place, the worldview that makes those systems look normal, and the myth beneath it. The current myth was named "the frontier that feeds the world", in which every hectare left to the forest looks like an unfinished job. The way back up began from another image, agriculture as "tending the forest-garden", which draws on the long history of Amazonian peoples who managed the forest as a cultivated space.

In the second phase, **Reframe**, the groups were sent to a deliberately strange future: 2126, a world in which forests speak human languages and manage humanity in unexpected ways, and in which humans have never been happier. The scenario is meant to be implausible. By breaking the usual links between causes and effects, it shows participants which of their expectations survive a change of rules and which collapse.

In the third phase, **Rethink**, the groups compared the images of the first two phases and wrote new questions for the present. A laboratory succeeds when participants leave with better questions than the ones they brought, and these are often the more uncomfortable ones.

WARM-UP	PHASE 1	BRIDGE	PHASE 2	PHASE 3
Polak game	Reveal 2076	Causal layers	Reframe 2126	Rethink
Where do I stand towards the future?	Probable and desirable futures	From headline to myth, and back	Forests that speak and decide	New questions for today

CURRENT MYTH

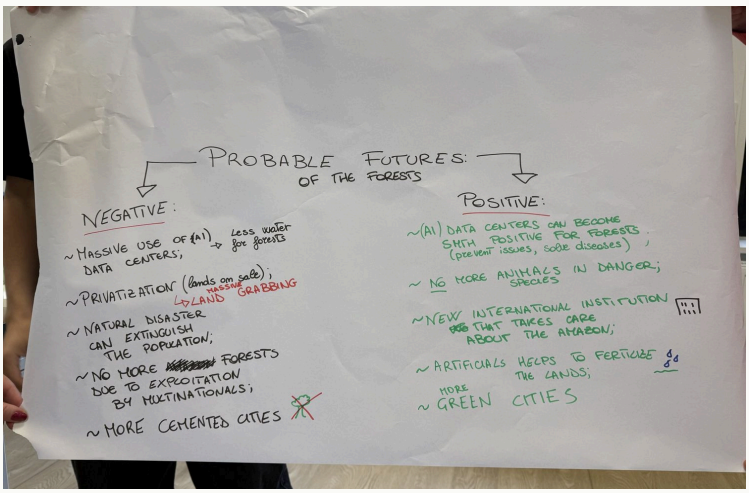
"The frontier that feeds the world"

EMERGENT MYTH

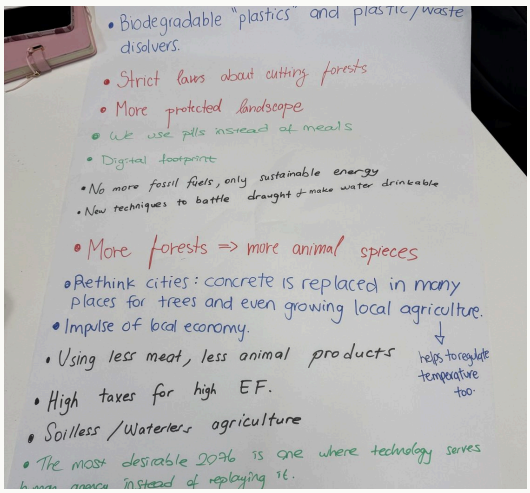
"Tending the forest-garden"

MONDAY · PHASE 1, REVEAL

The forests *of 2076*



"Probable futures of the forests", sorted into negative and positive.



A list of desirable futures for 2076.

The probable futures were dominated by technology. Artificial intelligence and data centres appeared on most posters, as threat and as rescue at once: consuming the water the forests need and the land they stand on, or optimising resources and curing forest diseases. Around them stood the familiar figures of the present, from land grabbing and cemented cities to heatwaves and wildfires, alongside alternatives to plastic, cleaner energy and wider access to education.

The people of the forest were nearly absent. One poster mentioned a "territorial unit for Indigenous peoples"; another entrusted the Amazon to "a new international institution that takes care" of it. In the probable future, decisions about the forest were taken from outside, by companies, algorithms or international bodies.

The desirable futures took a striking direction: protection by separation. The groups imagined "untouchable forests", "huge natural areas just for them", protected by gates and fences "so wild animals and humans do not mix", together with strict laws on cutting and high taxes on ecological footprints. Many of these futures were seen from the city: biodiversity returning to urban areas, concrete replaced by trees and local agriculture, pills instead of meals and farming without soil.

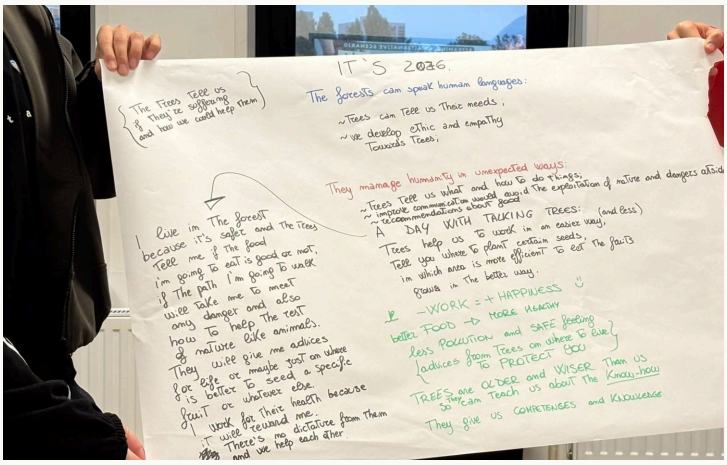
One sentence, written at the foot of a poster, summed up the tension the week would work on: "The most desirable 2076 is one where technology serves human agency instead of replacing it." On Monday, human agency meant the agency of the students' own world. The agency of those who already live in and from the forest had yet to enter the picture.

ON THE INVISIBLE SIDE OF THE GRID

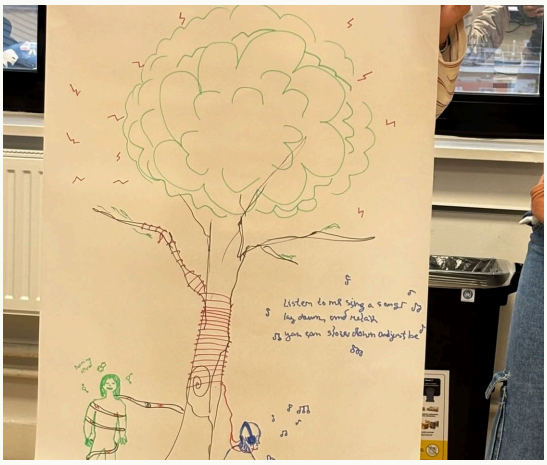
"Deforestation considered as a crime." · "Awareness raised in education." · "Agenda of powerful organisations for exploitation of natural habitats." · "Permanence of urbanised, alienated lifestyle." · "Individual isolation." · "People over-relying on AI."

MONDAY · PHASES 2 AND 3, REFRAME AND RETHINK

2126, and the questions *that came back*



"It's 2126": forests that speak, and a day in the life of those who live with them.



"Listen to me sing a song, lay down, and relax."

In 2126, the posters became stories. One group followed Linda, 64, through a summer day in the City of Tree: woken at 8:30 by her personal tree, a medical check at the tree hospital in the afternoon, a therapy session with her tree in the evening. Another described forests that employ people to work the soil and pay them in fruit and vegetables. A third told of a woman who walks to her favourite tree, listens to its music and realises that she no longer needs to work. Trees were older and wiser; they spoke through touch and shared their knowledge in exchange for care.

These futures were happy, as the scenario required, and they shared one feature: authority had moved to the forest. "Tree master rules everything." "No politics, no corruption." "The forest will decide what we can take from nature." Between 2076 and 2126, the power to decide passed from algorithms and international institutions to the trees themselves. Human communities, and above all the peoples who already live with the forest, still appeared mostly as recipients of decisions made elsewhere.

The Rethink phase brought the groups back to the present, and this is where the laboratory did its work. One group questioned the separation it had drawn in the morning and asked what would be lost if forests and humans were strictly kept apart. Another boxed the question it considered most important: how to preserve the forests outside legislation. Others asked how to assess the needs of an ecosystem, and what nature is telling us now that we fail to hear. These questions set the agenda for the rest of the week.

NEW QUESTIONS FOR THE PRESENT

Should we keep trying to co-exist with nature? What if we strictly separate forest and humans? What would we lose?

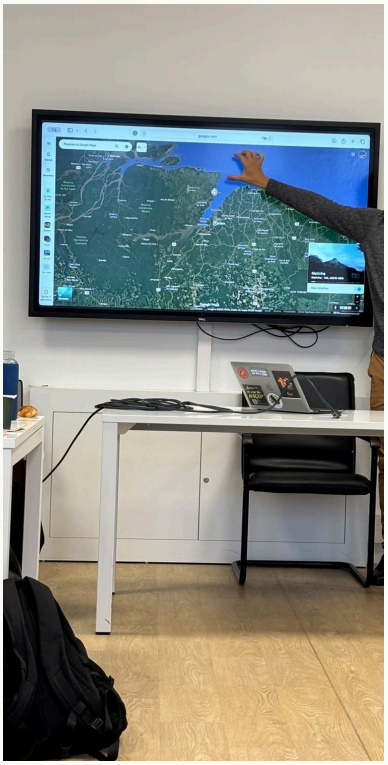
How can we preserve the forests outside legislation?

How do we assess the needs of an ecosystem? How can we reconnect with nature on a deeper level?

What is nature telling us right now that we are missing, and how can we learn from it in a way that benefits us and the forests?

TUESDAY 27 OCTOBER · MORNING

The territory, *seen from the river*



José Augusto Lacerda Fernandes guides the students across the Amazon on a live map.



Extraction, mining, stilt houses and the call to find Dom Phillips and Bruno Pereira.



Students of UPEC share photographs from the Immersive School in Pará.

On Tuesday morning, José Augusto Lacerda Fernandes, of the Universidade Federal do Pará, took the students to the Amazon with the tools at hand: live maps, satellite images and photographs. Zooming from the continent to the state of Pará, to the bay of Marajó and the islands facing Belém, and to the UFPA campus on the banks of the Guamá river, he gave the room a sense of scale that slides rarely convey: distances measured in days by boat, cities of more than a million people at the edge of the forest, island communities a short crossing from a university campus.

His account of social innovation in the Amazon included its violence. Images of rubber tapping and extractivist work sat next to stilt houses over waste, open-pit mining scars, and the banners calling to find Dom Phillips and Bruno Pereira, the British journalist and the Brazilian Indigenous expert killed in the Javari valley in 2022. The forest the students had imagined the day before, as a place to protect or to listen to, became a territory where people work, organise, negotiate and sometimes die defending it.

Three students of UPEC then spoke about the International Immersive School in Amazonian Sociobioeconomy, which they had joined in September between Belém and Santarém. They showed their own photographs of streets, markets, rivers and forest, and described what it meant to formulate a problem together with the people who live it. For the visiting students, it was the closest they could come to the field during the week: the account of peers of their own age who had been there a month before.

TUESDAY 27 OCTOBER · AFTERNOON

Four Amazons *in 2040*

In the afternoon, Lívia Torres, a researcher at Embrapa, the Brazilian Agricultural Research Corporation, introduced scenario planning: why organisations use scenarios, when they help most, and how the intuitive logics method associated with Peter Schwartz builds them, from a guiding question to seeds of the future, a selection of critical uncertainties, a two-by-two matrix and four narratives tested for relevance, coherence, plausibility and clarity.

Her case was BIAmazon 2040, a set of scenarios for an inclusive bioeconomy in the Amazon that she coordinated. One of its seeds of the future was a question: what if, by 2040, Amazonian communities became the primary custodians of the world's most valuable data on the rainforest? The two critical uncertainties retained were the consistency of public policies and investment in science and technology, and the involvement of traditional peoples in co-creating knowledge and technologies.

Comparing the four futures, the BIAmazon team drew lessons that speak directly to the students' projects. A large part of the uncertainty is institutional. The absence of co-creation brings risks as well as missed opportunities. Preparing for adversity means investing in local capacities before the shock comes. And the Amazon can move from being a recipient of technologies to a producer of innovation.

CONSISTENT PUBLIC POLICIES AND S&T INVESTMENT →

B · POLICIES, NO CO-CREATION

Connected Amazon, Disconnected Knowledge

Technology arrives ready-made and cooperatives grow, but value leaks away: copaiba oil sells for 30 reais a litre in the community and 200 online.

A · POLICIES AND CO-CREATION

The Forest's Voice Echoes, Brazil Responds

An institute of science and ancestral knowledge, governed by a council in which traditional peoples hold half the seats.

C · NEITHER

Strong Roots in Dry Ground

Funding dries up and crime advances; women's networks and young technicians hold on through a drought and a trade blockade.

D · CO-CREATION, NO POLICIES

Islands of Prosperity in Turbulent Rivers

Community-led initiatives thrive, with a platform that tells the story of each product and consent-based data governance, but they cannot scale.

CO-CREATION WITH TRADITIONAL PEOPLES →

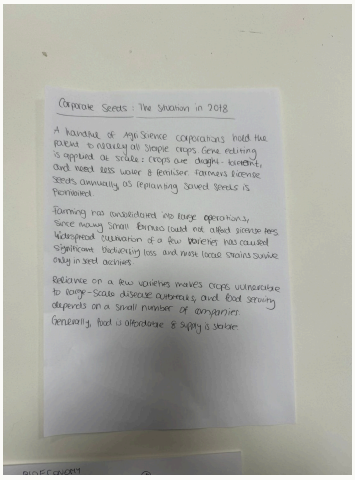
BIAmazon 2040 scenarios, coordinated by Lívia Torres (Embrapa) and presented to the students on 27 October. Summary by the editor.

TUESDAY · SCENARIO EXERCISE

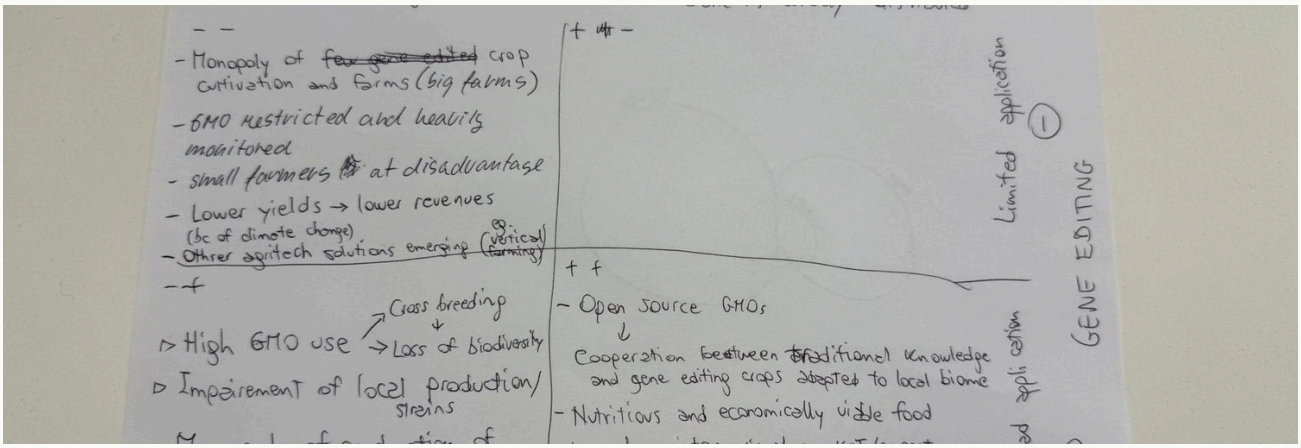
Challenging *a ghost scenario*

The exercise that followed placed the students in the position of advisers to Embrapa. Their starting point was what Lívia Torres called the ghost scenario: the future that an organisation's strategy assumes without saying so. In Embrapa's plan for 2024–2030, it reads: “Scientific and technological innovation will continue to create opportunities for more sustainable, productive and inclusive food systems.” The students were asked what would happen if the future unfolded differently.

In a first round, two groups identified the critical uncertainties that could break this expectation and each built a matrix. The class retained one of them. On one axis, the benefits of agricultural innovation are either concentrated among a few actors or widely distributed; on the other, gene editing remains limited or becomes widespread. In a second round, four groups each wrote a page on one quadrant, looking at 2050.



“Corporate Seeds”, one of the four narratives.



The matrix retained by the class: distribution of benefits (horizontal) and spread of gene editing (vertical).

The most complete narrative, *Corporate Seeds*, describes a world in which a handful of agri-science corporations hold patents on nearly all staple crops. Drought-tolerant varieties need less water and fertiliser; food is affordable and supply is stable. Yet farmers license their seeds every year, saving seed is prohibited, small farms disappear, and local varieties survive only in seed archives. Technology succeeds and the food system becomes more fragile: a clear refutation of the link between innovation and inclusion that the ghost scenario takes for granted.

Another group explored the opposite corner, where gene editing is widespread and its benefits are shared through open-source crops. For the first time in the week, a student text placed traditional knowledge at its centre, with “cooperation between traditional knowledge and gene-edited crops adapted to the local biome”. The quadrant that combines widely shared benefits with limited gene editing, the path closest to agroforestry and to Monday's forest-garden, remained the least explored.

Lívia Torres closed the session with an exercise that echoed Monday's Polak game: the students redrew three circles standing for past, present and future, and compared them with the drawing they had made at the start of the afternoon.

WEDNESDAY 28 OCTOBER · MORNING

The city *that embraces the forest*



Ramon Rispoli presents a city of productive rooftops and continuous productive urban landscapes.

On Wednesday morning, Ramon Rispoli, of the Università degli Studi di Napoli Federico II, moved the discussion to the other end of the chain: the city. He began with a fresco painted in Siena in 1338, Ambrogio Lorenzetti's *Allegory and Effects of Good Government*, in which city and countryside form a single, visible system of fields, roads, gates and markets.

That picture has since broken apart. Four industrial crops, soy, oil palm, rapeseed and sugar cane, have taken over some 140 million hectares in fifty years (Thackara, 2015). Food travels further every decade, kept by a cold chain that the writer Nicola Twilley called a “distributed winter” and that gives European supermarkets a permanent summer. The chain has become invisible to those who eat, as Carolyn Steel showed in *Hungry City* (2008), and platforms and ghost kitchens push that invisibility one step further.

The alternatives he presented begin by making the chain visible again: the FAO's City-Region Food Systems programme; Carolyn Steel's idea of *sitopia*, a place shaped by food; and the Continuous Productive Urban Landscapes of Katrin Bohn and André Viljoen, who estimate that London could grow about thirty per cent of its fruit and vegetables on leftover land. Ten cases followed, from a community garden at the Politecnico di Milano to The Food Assembly, Copenhagen's Impact Roasters, the Park Slope Food Coop in New York and the Slow Food movement, whose manifesto calls its members “co-producers”.

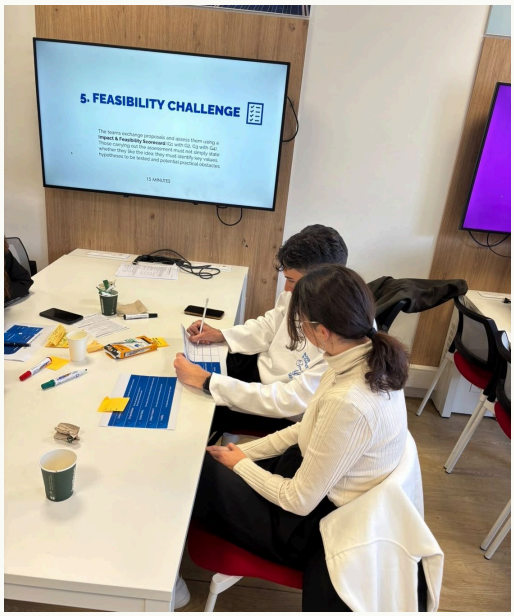
His conclusion was addressed to designers, and to students about to design. Complex problems have no single solution; any search for “the” solution, wrote Kees Dorst (2019), is riddled with assumptions. Design, in John Thackara's words, should be “more about steering than about shaping”: small and continuous interventions that move a whole system towards a better state.

WEDNESDAY · MICRO-HACKATHON

From challenges *to project ideas*



Silent ideation, one idea per sticky note.



The feasibility challenge: teams assess each other's concepts.

Benedetta Toledo, a doctoral candidate in philosophy of design at Federico II, then turned these ideas into a method. She opened with three cases: Sabores & Saberes in Colombia, which documents and transmits the culinary knowledge of the *matronas*, the women who keep traditional recipes alive; Ainonghui, a farmers' association in Liuzhou, China, which links remote villages to city consumers through community-supported agriculture and fair prices; and La Louve, the participatory supermarket in Paris where members work a few hours a month. Each showed a different way of connecting knowledge, producers and consumers, and of sharing value along the chain.

The micro-hackathon that followed took ninety minutes and six steps. It started from the directions of the design brief: new products and value chains that share value fairly, platforms linking Amazonian producers with buyers, services for community enterprises, and storytelling initiatives. Each team left with one concept, a canvas describing its problem, beneficiaries, values and obstacles, and the assessment of another team.

That assessment used a scorecard of five criteria: community value, fair distribution of value, economic viability, ecological and cultural fit, and feasibility. Its second criterion asked the question the week kept returning to: who controls resources, data and benefits? The instruction was explicit. Evaluators had to identify values, hypotheses to test and practical obstacles, and go beyond saying whether they liked the idea.

1	2	3	4	5	6
Silent ideation 10 min	**Share and cluster** 15 min	**Shortlist** 15 min · three votes each	**Concept canvas** 20 min	**Feasibility challenge** 15 min · peer scorecard	**Share and decide** 15 min

WEDNESDAY 28 OCTOBER · AFTERNOON

At the end *of the chain*

On Wednesday afternoon, the group crossed Paris to the Salon du Chocolat at Paris Expo Porte de Versailles, to see where part of the Amazonian value chain ends: in the aisles of one of Europe's major chocolate fairs.

At the Cacau do Brasil stand, supported by the governments of Pará and Bahia and by FUNCACAU, the students were welcomed by Nicolas Bernard Danaux, who talked with them about Brazilian cacao and its journey to European consumers, next to a counter of bars ranging from 50 to 100 per cent cocoa. José Augusto Lacerda Fernandes, who had joined the group, was interviewed at the stand by the Brazilian press.

The stand was a lesson in how origin is sold. A forest backdrop, the flags of Brazil and Pará, the names of producing regions on the packaging: the Amazon was present as a promise of quality. A few metres away, fair-trade bars from UNOCACE in Ecuador displayed each stage of transformation, from bean to nibs, butter and powder. On a small Brazilian bean-to-bar box, Casa Lasevicius had printed fourteen illustrated steps, from selective harvest to plastic-free packaging.

These objects made visible what Ramon Rispoli had described in the morning, a chain usually hidden from those who eat. They also raised the question that Lívia Torres's second scenario had put in figures, with copaiba oil sold for 30 reais a litre in the community and 200 online. How much of the price paid in Paris reaches those who harvest the cacao, and do they have a say in the story told about them? The packages told the story of the process in detail; the people behind it, and their share, remained out of view.

The students carried that question into their projects the next morning.



From pod to bar: fair-trade chocolate from Ecuador.



José Augusto Lacerda Fernandes interviewed at the Cacau do Brasil stand.

Above: the group at the Cacau do Brasil stand with Nicolas Bernard Danaux.



The production chain printed inside a Brazilian bean-to-bar box.



Students and teaching team under the Cacau do Brasil sign.

THURSDAY 29 AND FRIDAY 30 OCTOBER

Four projects

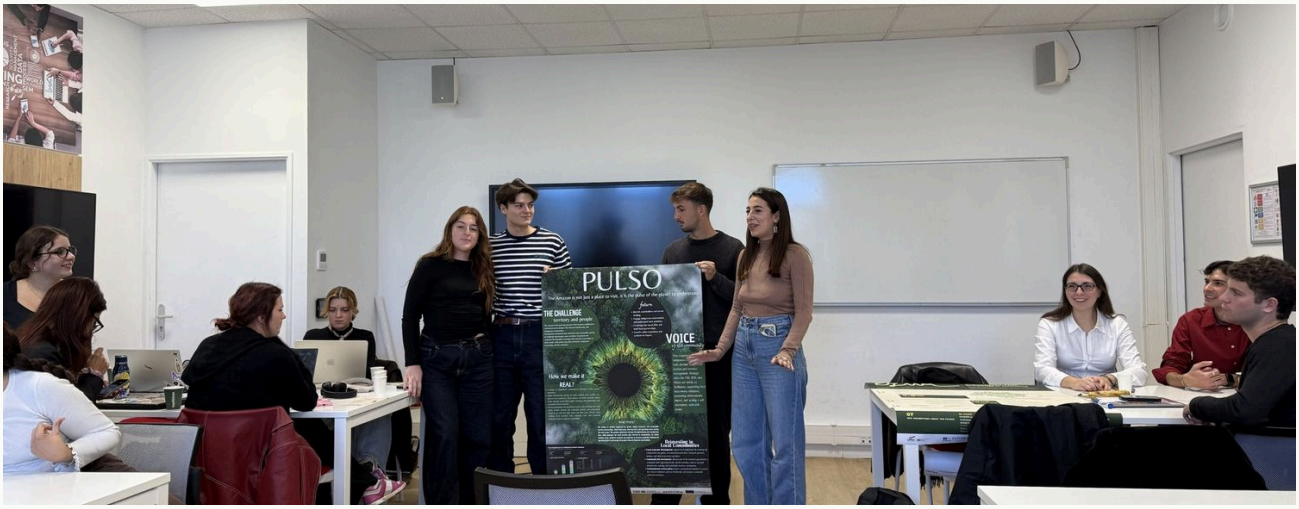
The design brief asked each team to imagine a business project with and for the communities of Amazonian sociobiodiversity: a project that creates value from the standing forest and shares it fairly with those who keep it standing.

Thursday was given over entirely to team work. Each team turned the concept chosen on Wednesday into an A0 poster, sent for printing at 17:00, and a video of up to three minutes, submitted on Friday at 10:00. From 11:00 on Friday, the four teams presented their posters and videos to the class and the teaching team, who assessed the poster (40 per cent), the video (30 per cent) and the presentation (30 per cent).

The teams were deliberately mixed. Each brought together four students from three universities, working together in English.

The pages that follow present each project as the team submitted it: its poster, its main idea and its business model. They also show how each concept travelled between Wednesday's canvas and Friday's poster, and the question it opens for a next step. Read together, the four projects cover the directions of the brief: a platform for exchanging knowledge, a brand that tells the story of producers, tourism governed by communities, and a river clean-up that pays local workers.

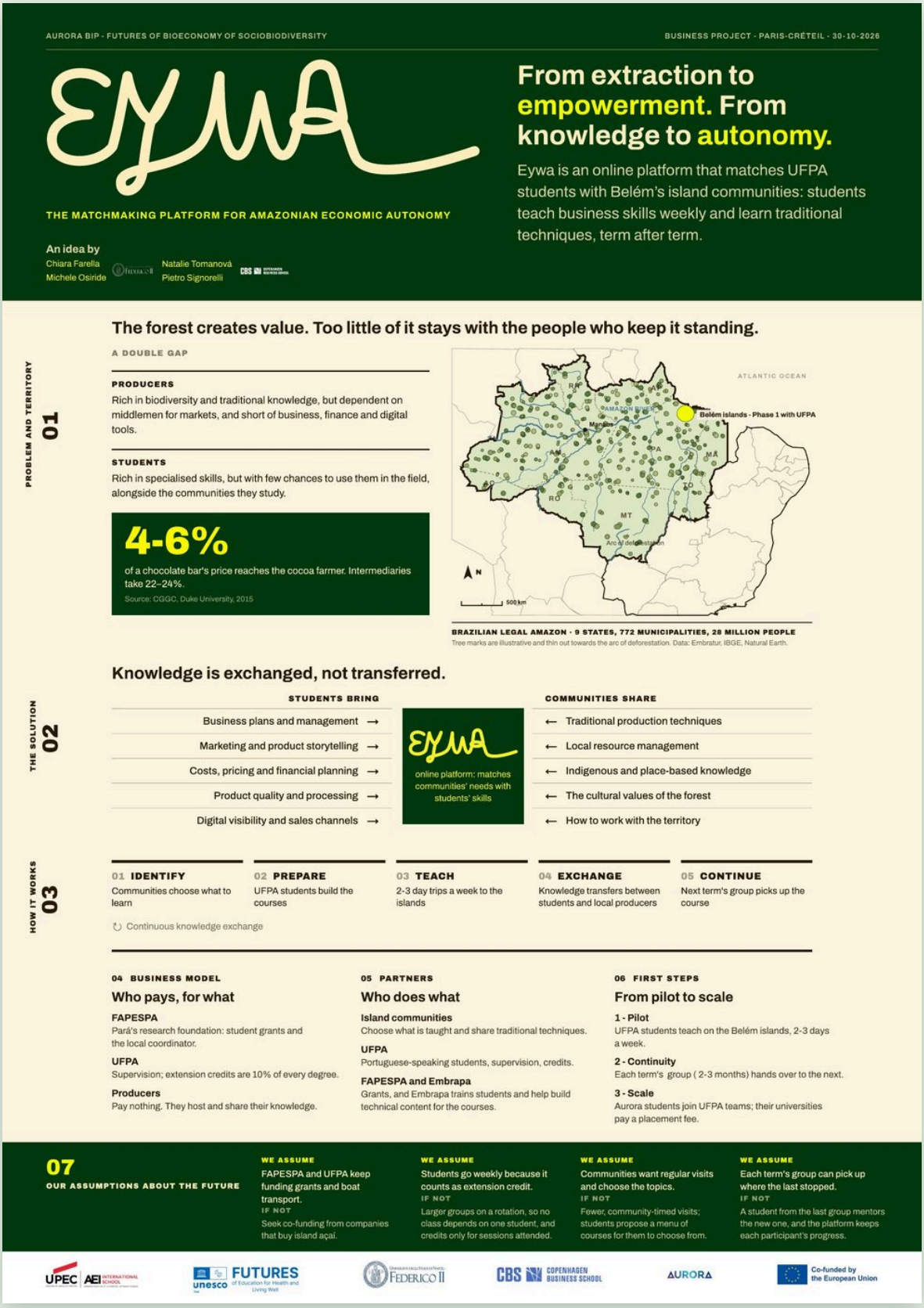
EYWA p. 20	A platform matching UFPA students with island communities for an exchange of business skills and traditional knowledge.	Islands of Belém, Pará
AÇANIA p. 22	A brand and a shop selling açaí from remote producers, each label telling their story.	Belém, Pará
PULSO p. 24	Immersive tourism governed by Indigenous communities, with an online booking platform.	Amazon, pilot of three local nodes
REPLASTICO p. 26	River tours combining plastic clean-up, upcycling workshops and paid local jobs.	Manaus, Amazonas



Friday 30 October: a team presents its poster to the class.

PROJECT 1 OF 4

A0 POSTER



TEAM

Chiara Farella, Federico II
Natálie Tomanová, Palacký University Olomouc
Michele Osiride, Federico II
Pietro Signorelli, Copenhagen Business School

VIDEO

EYWA – BIP 2026, 1 min 08 s

Poster reproduced as submitted by the team.

KNOWLEDGE EXCHANGE PLATFORM

Eywa · *from extraction to empowerment*

An online platform that matches students of the Universidade Federal do Pará with the island communities of Belém, so that business skills and traditional knowledge travel in both directions, term after term.

THE IDEA

The team started from what it called a double gap. Producers on the islands are rich in biodiversity and traditional knowledge, yet depend on middlemen to reach markets and lack business, financial and digital tools. Students are rich in specialised skills, yet rarely use them in the field, alongside the communities they study. Eywa pairs the two. Students bring business plans, marketing and product storytelling, costing and pricing, product quality and digital sales channels. Communities share traditional production techniques, the management of local resources, Indigenous and place-based knowledge, the cultural values of the forest and the ways of working with the territory.

HOW IT WORKS

Communities choose what they want to learn; UFPA students prepare the courses and travel to the islands two or three days a week; knowledge is exchanged; and the next term's group picks up where the last one stopped. A pilot on the islands facing Belém would be followed by continuity across terms and, later, by teams joined by Aurora students.

WHO PAYS

FAPESPA, the research foundation of Pará, would fund student grants and a local coordinator. UFPA would supervise the students and recognise their work through extension credits, which account for ten per cent of every Brazilian degree. Embrapa would help train students and build technical content. Producers pay nothing: they host the students and share their knowledge. At scale, the home universities of visiting Aurora students would pay a placement fee.

FROM WEDNESDAY TO FRIDAY

On Wednesday, the problem was written from one side: producers who lack business skills and who, in the evaluating team's words, might be "afraid of change". By Friday, the poster described a gap on both sides and adopted a principle in the team's own words: "Knowledge is exchanged, not transferred." The team also added a section found on no other poster, "Our assumptions about the future", listing four expectations on which the project depends (funding, credits, the communities' wish for regular visits, continuity between terms) and what to do if each one fails. Monday's laboratory reappears here as a business tool.

THE NEXT QUESTION

How will the knowledge that communities share be recognised and rewarded, in the way students are rewarded with credits?



The Eywa team presents its poster on Friday 30 October.

PROJECT 2 OF 4

A0 POSTER



TEAM
Mariana Cantú Dosal, University of Iceland
Zeynep Sude Erdoğan, Federico II
Barbora Pyšková, Palacký University Olomouc
İdil Sevim, Federico II

VIDEO
Açania promo, 30 s

Poster reproduced as submitted by the team. Photographs on the poster: Getty Images, Sara Flores, Wenderson Nunes.

BRAND AND VALUE CHAIN

Açania · *journey of the berry*

A brand and a shop in central Belém selling açaí from remote producers, with labels that tell the story of the people and places behind each product. Its motto: “Every berry has a story.”

THE IDEA

The team observed that large companies profit from Amazonian products while the communities who produce them receive a disproportionately small share, and that producers in remote areas are further disadvantaged because tourism concentrates in a few parts of the Amazon. Açania positions itself as a middle ground between producers and consumers, redistributing profit through fair trade and revealing the story behind each berry, including the hard work of the harvest.

HOW IT WORKS

Producers deliver their açaí to a physical store in the centre of Belém, where products are sold under the Açania label in a common packaging. Each label carries the region of origin, a portrait of the producers who wish to appear, and a short text about the place, the way the açaí is produced or the lives of those who harvest it. Pop-up “immersive açaí-picking experiences” in tourist spots of the city would let visitors feel, safely, how demanding the harvest is.

THE APPROACH

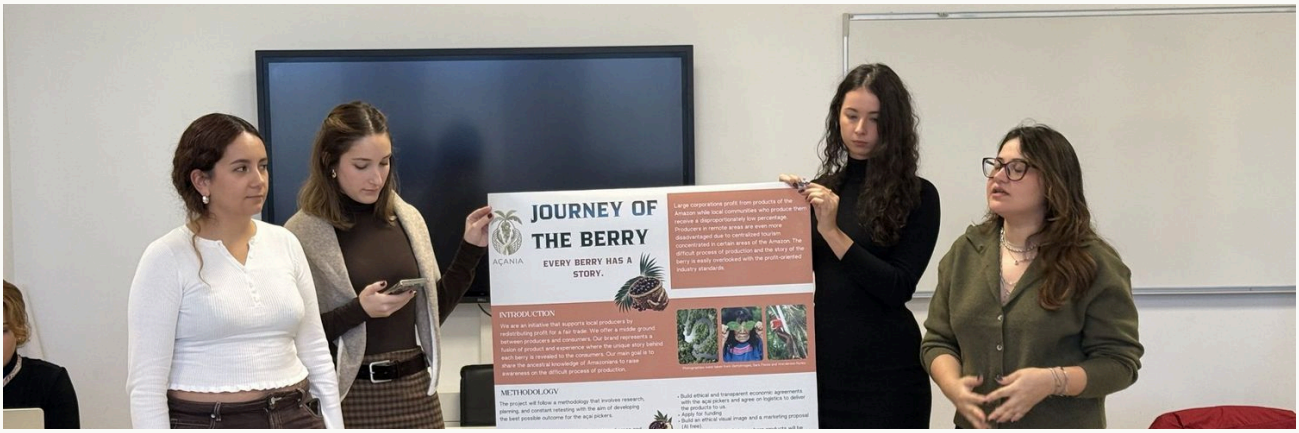
The team plans interviews with local people and experts on untapped areas and on an ethical and horizontal relationship; a market study of açaí products in Brazil; transparent economic agreements with the pickers, including logistics; and a visual identity made without artificial intelligence. Funding would come from the Brazilian government, from the students' home or host countries, and from companies seeking “green agreements”.

FROM WEDNESDAY TO FRIDAY

On Wednesday, the concept was a service representing producers. The evaluating team asked whether similar cooperatives already exist, whether producers would pay to be represented, and how data would be shared. By Friday, the concept had become a brand that makes producers visible through their portraits and stories, with their consent, built around an ethical and horizontal relationship with the pickers.

THE NEXT QUESTION

What share of the final price will reach the pickers, and how will they take part in setting it? In Belém, where açaí is everyday food, the question also concerns who will be able to buy it.



The Açania team presents its poster on Friday 30 October.

PROJECT 3 OF 4

A0 POSTER



TEAM
Francesco Antonioli, Copenhagen Business School
Marco Miolla, Palacký University Olomouc
Francesca Perrone, Federico II
Fulvia Santagata, Federico II

VIDEO
There is a pulse that connects us all, 1 min 01 s

Poster reproduced as submitted by the team.

COMMUNITY-LED TOURISM

PULSO · *the voice of the community*

Immersive and sustainable tourism in the Amazon, governed by Indigenous communities, who keep control over tourism and over the management of their resources.

THE IDEA

PULSO starts from the pressure that resource extraction and infrastructure projects put on biodiversity and on Indigenous communities. It proposes a form of tourism designed to challenge stereotypes, raise travellers' awareness and give local people the means to manage their resources according to their own needs, while protecting their territories, their traditional knowledge and the forest. Its principle is written in large type on the poster: “True co-governance.” Allies such as FAS and the IDB act strictly as facilitators, supporting local bioeconomy initiatives and measuring environmental impact.

HOW IT WORKS

Experiences are planned with the communities. An online platform lets travellers discover them, book services and pay, and attracts visitors through social media and sustainable-tourism networks. A pilot with three local nodes would be evaluated for demand and community benefit, then extended to six and to eight nodes over three years, with monitoring of visitor numbers, local economic value, operating costs and community feedback.

WHO PAYS

Grants, impact investors and sustainable-tourism partners cover start-up costs and early operating losses. The platform earns booking and coordination fees, while payments for local services go directly to the communities. Part of the resources feeds a community fund for locally chosen priorities, such as essential infrastructure, training and sustainable businesses, and for conservation initiatives led by the communities.

FROM WEDNESDAY TO FRIDAY

Wednesday's canvas listed responsible travellers before local communities among the beneficiaries, named the gap in value distribution as a problem, and anticipated possible mistrust by locals. By Friday, the order had changed. Communities came first, with “absolute control over tourism and resource management”, and travellers became guests in a model designed to be self-determined and replicable.

THE NEXT QUESTION

Who will own the booking platform and decide on its fees? The answer will show whether co-governance extends to the digital layer of the project.



The PULSO team presents its poster on Friday 30 October.

PROJECT 4 OF 4

A0 POSTER



TEAM

Eleonora Caldi, Federico II
Laura Zaske, Federico II
Luise Kuhn, Copenhagen Business School
Viola Pražáková, Palacký University Olomouc

VIDEO

RePlastico, 1 min 49 s

Poster reproduced as submitted by the team.

RIVER TOURISM AND UPCYCLING

RePlastico · *cleaning up together*

River tours from Manaus that combine sustainable tourism with plastic clean-up and upcycling workshops, creating properly paid jobs for those who know the river best.

THE IDEA

The Amazon is the largest river basin in the world and home to thousands of communities who depend on its resources. Plastic waste enters it from boats, towns and riverside settlements, and fragments end up in the fish that feed those communities. RePlastico offers visitors something more active than a standard river tour: guests take part in a supervised clean-up from the boat, then make bracelets and other objects from pre-treated plastic in an upcycling workshop, and leave with a souvenir of their own making.

HOW IT WORKS

The company connects tourists, local boat operators and workshop educators with local communities and with the waste-picker cooperatives already active in the region, which it places "at the center, as partners who already know the river and its waste". Part of the revenue funds environmental education for local communities, on the principle that clean-ups remove the plastic already in the river, while lasting change in habits is what stops new waste from entering it.

WHO PAYS

The team chose to publish its price structure. A one-day ticket costs 45 dollars: 18 for boat operators and cruise costs, 8 for workshop educators, 5 for materials and waste management, 5 for administration and marketing, 5 for a local education fund and 4 for a business reserve. Twenty-six of the forty-five dollars go to local operators and educators. The initial investment would be financed by a business loan.

FROM WEDNESDAY TO FRIDAY

On Wednesday, the concept offered tourists a 25 per cent discount for collecting waste, to be reimbursed by local communities and NGOs. The evaluating team noted that "people from the Amazon are going to benefit the most, but students, tourists create the value". By Friday, the economics had been turned around: tourists pay, the price split is public, and local workers and cooperatives are named as partners.

THE NEXT QUESTION

Where does the plastic in the river come from, and who should pay to stop it upstream, before it reaches the boats?



The RePlastico team presents its poster on Friday 30 October.

WHAT THE WEEK TAUGHT US

From the forest as a place *to the forest as people*

Read in sequence, the materials of the week tell a story of learning. It belongs to the group as a whole: no single team, session or document carries it alone. It can be followed along four movements.

1

FROM SEPARATION TO PARTNERSHIP

On Monday, the desirable forests of 2076 were protected by keeping people out: untouchable reserves, fences, strict laws. In 2126, the groups imagined living alongside trees that speak and care. By Friday, the four projects placed the people who live in the Amazon at their centre. Island communities choose what they learn and what they teach. Pickers appear in portrait and in story on the products they harvest. Indigenous communities hold control over tourism and resources. Local boat operators, educators and waste-picker cooperatives become paid partners. In five days, the forest moved from a landscape to be protected to a territory inhabited by people with knowledge, rights and interests of their own.

2

FROM WHO BENEFITS TO WHO DECIDES

Decision-making changed hands several times during the week. On Monday, it belonged to algorithms, to international institutions and, in 2126, to the trees. On Tuesday, the students' matrix asked how widely the benefits of innovation would be distributed. On Wednesday, the scorecard asked who controls resources, data and benefits. On Friday, the posters spoke of co-governance, of communities choosing the topics, of community funds and of payments going directly to local hands. The question shifted from who receives to who decides, which is the question at the heart of the BIAmazon scenarios.

3

VALUE MADE VISIBLE

Isabel Fróes had insisted that knowledge, consent and benefit-sharing cannot be separated. Lívia Torres's scenarios had put a price on their separation, with copaiba oil sold for 30 reais in the community and 200 online. The Salon du Chocolat had shown how carefully the process of making chocolate is displayed, and how rarely the producers' share is. On Friday, every team addressed the distribution of value explicitly: a ticket price broken down to the dollar, payments flowing directly to communities, a brand founded on redistribution, a gap described on both sides of an exchange.

4

ASSUMPTIONS AS WORKING TOOLS

The thread announced on the first day ran through every session: anticipatory assumptions in the laboratory, the ghost scenario behind Embrapa's strategy, the assumptions hidden in any search for “the” solution, the hypotheses to be tested in the scorecard. One poster turned it into a section of its business model, listing what the project assumes about the future and what the team would do if each assumption failed. This is the capacity futures literacy aims to build: using the future to see the present more clearly, and acting with that awareness.

> *"We consider ourselves co-producers, not consumers."*
>
> Carlo Petrini, Slow Food Manifesto, 1989, quoted by Ramon Rispoli on Wednesday 28 October

WHAT REMAINS OPEN

The trajectory is real, and it is also incomplete. In all four projects, the communities of the Amazon are partners in the future described on the poster. During the week, they were present through the voices of José Augusto Lacerda Fernandes, Lívia Torres and the students of UPEC back from Pará, and through the images the students brought with them. Co-creation remained the promise of each project's next phase.

Two of the four projects are forms of tourism, in which the European student enters the Amazon as a visitor; the two others rely on students or on a new intermediary. These are reasonable choices for a week of work, and they also act as a mirror. They show how hard it is, from Europe, to imagine an economic role other than that of the visitor, the buyer or the adviser, and how much the position Carlo Petrini called co-production still has to be invented.

Technology, finally, was the default variable of the first days. By Friday, it had receded behind questions of governance and value. The path that Tuesday's scenarios left least explored, the one closest to agroforestry and to the forest-garden of Monday, is still waiting for its project.

FOR THE NEXT EDITION

Bring the Amazon into the room in real time. A short online session on Wednesday, in which partners from UFPA and from community organisations react to the teams' concepts, would make co-creation part of the week itself.

Add a sixth criterion to the scorecard. Next to community value and fair distribution, a criterion on co-creation would ask each team who designs and governs the project with them, and how.

Keep the sequence. Framing, imagining, grounding, designing, meeting the market and building proved a coherent order. Each session prepared the next, and the final projects drew on concepts from every day.

Name every partner. Students from Palacký University Olomouc and the University of Iceland took a full part in the programme. Future materials and templates will carry the names of all participating universities.



Friday 30 October, the last presentation of the week.

SYNTHÈSE EN FRANÇAIS

Une semaine pour apprendre *à poser les bonnes questions*

Le Blended Intensive Programme (BIP) Aurora *Futures of Bioeconomy of Sociobiodiversity* s'est tenu en ligne le 20 octobre puis à l'Université Paris-Est Créteil du 26 au 30 octobre 2026. Organisé par la Chaire UNESCO Futures of Education for Health and Living Well, à l'AEI International School de l'UPEC, avec l'Université de Naples Frédéric-II et la Copenhagen Business School, il a réuni seize étudiants de quatre universités de l'alliance Aurora : Naples Frédéric-II, Palacký d'Olomouc, la Copenhagen Business School et l'Université d'Islande. L'Universidade Federal do Pará et l'Embrapa, l'entreprise brésilienne de recherche agronomique, y ont contribué comme intervenants invités.

Le programme portait sur la bioéconomie la plus exigeante, celle de la sociobiodiversité, qui lie la diversité biologique aux savoirs, aux pratiques et aux modes de vie des peuples qui vivent avec la forêt. Il fait suite à l'École immersive internationale en sociobioéconomie amazonienne, organisée par l'UPEC et l'Universidade Federal do Pará à Belém et Santarém en septembre 2026. Cette école a été créée pour les étudiants de l'UPEC du Master Management et commerce international – Amérique latine (option Brésil), dispensé à l'AEI International School ; plusieurs d'entre eux sont venus témoigner pendant la semaine.

La semaine a suivi une progression en six temps : cadrer la bioéconomie (Isabel Fróes, CBS) ; imaginer les futurs des forêts dans un laboratoire de littératie des futurs (Felipe Koch, UPEC) ; découvrir le territoire amazonien (José Augusto Lacerda Fernandes, UFPA) et quatre scénarios pour 2040 (Lívia Torres, Embrapa) ; repenser la ville par l'alimentation et concevoir des projets lors d'un micro-hackathon (Ramon Rispoli et Benedetta Toledo, Frédéric-II) ; rencontrer le marché au Salon du Chocolat ; enfin construire et présenter quatre projets, chacun accompagné d'un poster A0 et d'une vidéo.

Les quatre projets sont **Eywa**, une plateforme d'échange entre étudiants de l'UFPA et communautés insulaires de Belém ; **Açania**, une marque qui raconte l'histoire des producteurs d'açaí ; **PULSO**, un tourisme gouverné par les communautés autochtones ; et **RePlastico**, des circuits fluviaux de dépollution qui rémunèrent les acteurs locaux.

Les productions de la semaine dessinent une trajectoire d'apprentissage. Lundi, les étudiants protégeaient la forêt en tenant les humains à distance et confiaient les décisions à des institutions internationales, aux algorithmes, puis aux arbres eux-mêmes. Vendredi, les quatre projets plaçaient les habitants de l'Amazonie au centre, comme partenaires, détenteurs de savoirs et décideurs. La répartition de la valeur et sa gouvernance sont devenues explicites dans chaque projet, et les hypothèses sur le futur, que le laboratoire du lundi avait appris à repérer, sont devenues un outil de conception.

Cette trajectoire reste ouverte. Les communautés amazoniennes n'étaient présentes qu'à travers la voix des intervenants, et la co-création demeure une étape à venir des projets. Pour la prochaine édition, l'équipe pédagogique retient quatre pistes : associer en direct des partenaires amazoniens à la critique des projets, ajouter un critère de co-création à la grille d'évaluation, conserver la progression de la semaine, et mentionner toutes les universités participantes dans les supports.



Au Salon du Chocolat, sur le stand Cacau do Brasil, mercredi 28 octobre.

CONTRIBUTORS, PARTICIPANTS AND WORKS CITED

The people of the programme

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Isabel Fróes, Copenhagen Business School
Ramon Rispoli, Università degli Studi di Napoli Federico II
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Lívia Torres, Embrapa
Three students of UPEC who took part in the International Immersive School in Amazonian Sociobioeconomy, September 2026
Nicolas Bernard Danaux and the Cacau do Brasil stand, Salon du Chocolat, Paris

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University of Iceland · Mariana Cantú Dosal

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