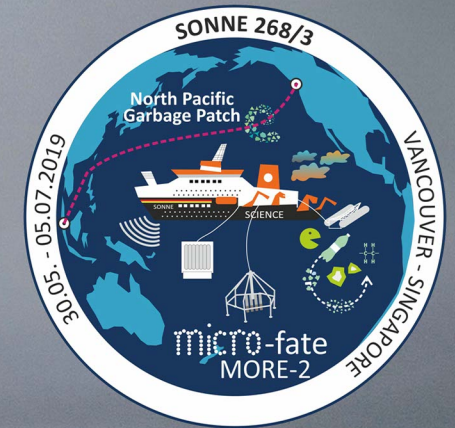


Microplastics and Chameleons - poetic expeditions into H₂O

Interdisciplinary school project about the plastic pollution of the oceans

Helmholtz Centre for Environmental Research - UFZ
Alluvial Forest Station
Louise-Otto-Peters Gymnasium
(Leipzig/Germany)



Roman Kroke | Interdisciplinary Artist
Direction & Concept



eku idee

PREISTRÄGER
2021

ZUKUNFTSPREIS FÜR
ENERGIE, KLIMA, UMWELT
IN SACHSEN
FÜR ALLE

STAATSMINISTERIUM
FÜR ENERGIE, KLIMASCHUTZ,
UMWELT UND LANDWIRTSCHAFT



ENVIRONMENTAL AWARD: In November 2021, the pilot-workshop in partnership with the Helmholtz-Centre for Environmental Research (UFZ), the Louise-Otto-Peters Gymnasium and the Alluvial forest station (all in Leipzig/Germany) was distinguished with the environmental prize eku – ZUKUNFTSPREIS 2021 (2.500 €), awarded by the Saxon State Ministry for Energy, Climate Protection, Environment and Agriculture.





PHASE 1: From his art studio in Lyon (France), Roman Kroke introduced the German class via videoconference to the research expedition MICRO-FATE which he had accompanied on board of the German research vessel SONNE from Vancouver (Canada) to Singapore on behalf of the UFZ Leipzig. The students got an exclusive behind-the-scenes dive into his current art works about ocean conservation.

Through his symbol for plastic, the chameleon, the students discovered how they can experiment with personal associations and artistic metaphors to develop their own storytelling about environmental issues.





PHASE 2: In the UFZ student lab, the students learned about the lab book as an experimental logbook of science. All parameters of a research project are to be noted down in it in as much detail as possible. Unresolved or incorrect entries are not to be made unrecognisable, but crossed out so that everyone can still understand what was corrected and for what reason. We transferred this approach to the later concept description of the artworks: failed installation attempts were also part of the "artistic lab report".

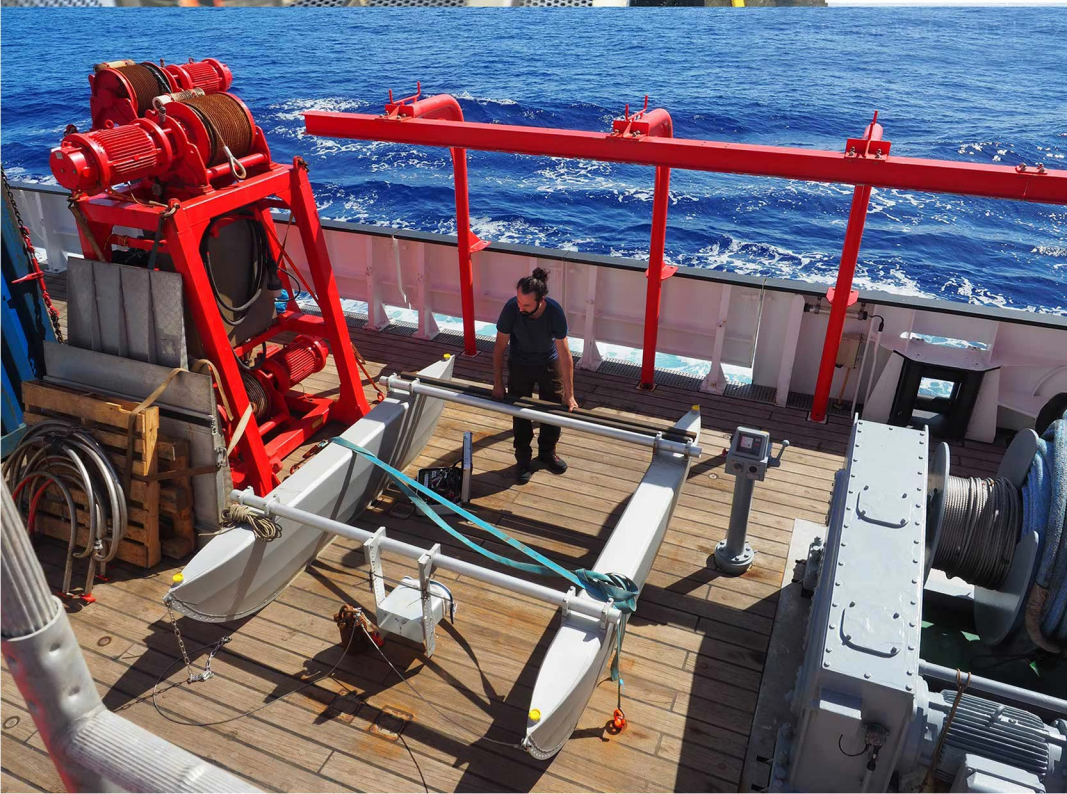
In the student lab, the class recycled a polyester by melting it down. From the melt, they drew threads with a wooden stick, which, when cooled down, can be wound up and woven into new fabric; many discounters have such bags on sale. The students applied the metaphor of the thread as a reference to this experience in the student lab when they later designed their collective artwork: They connected all their individual creations with a thread symbolising the connections in the fragile ecological fabric of our world.

What we learned in the lab about our "CO2 footprint" was also metaphorically developed further in various artworks; see, for example, in *The Sun Wheel* and in *Monument to the Battle of the Nations*.



At the UFZ, the students also met three researchers who had taken part in the Pacific expedition:

Dr Annika Jahnke (expedition coordinator, bottom right) and PhD students *Robby Rynek* (top left) and *Christoph Rummel* (bottom left/right). From them, they were able to learn first-hand what questions about plastic pollution are currently burning the minds of the researchers.





Phase 3: During a guided tour, *Dr Nadia Nikolaus* (project manager of the Auwaldstation Leipzig) sensitised the students to the problems of the hardwood floodplain: pedunculate oak, common ash and field elm are "dying of thirst alive". The reasons for this are flood protection measures (dyking, canalisation of river courses), exacerbated by general climate warming. Furthermore, Dr Nikolaus made the class aware of the areas of the alluvial forest where they were allowed to collect artificial material (branches, leaves, etc.) and where this was prohibited for nature conservation reasons.

From *Sebastian Günther* (managing director of the Alluvial forest station) they learned that the trees produce less resin due to the water shortage. "This makes them more susceptible to infestation by elm splint beetles or ash bark beetles. Because if there is a good flow of resin, when trying to bore into the trunk the beetles are usually catapulted out again as if on a fountain". Several students transformed this input in their artworks (see p. 30-38).





Phase 4: After the tour, Roman Kroke launched the artistic part of the project by asking the students to close their eyes, imagine the floodplain forest and listen to a sound collage. "What images are now playing in your floodplain forest based on these sounds?"

"There are whales swimming through the floodplain forest, making suffering, wailing cries of agony!"

Some had recognised the underwater calls of whales. This sparked off a discussion with the result that this surreal scene would somehow reflect the true ecological interdependence much better. Our consumer behaviour (including plastic pollution) has a direct impact on distant oceans (e.g. through the transport of microplastics via rivers).

The students' vision inspired by the sound collage: Humpback whales travelling through the floodplain forest.



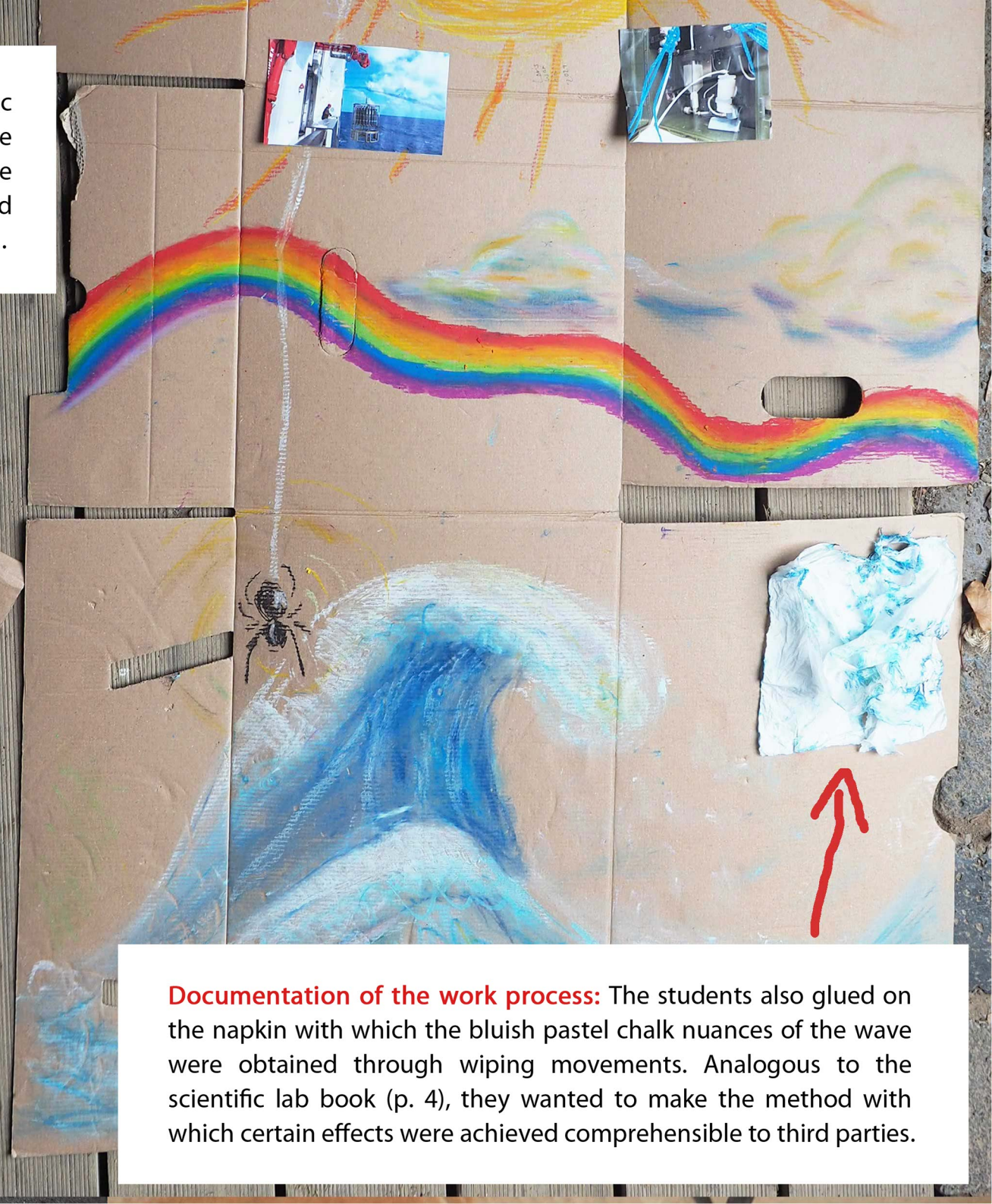
Phase 5: In groups, the students analysed excerpts from the travel blog that Roman Kroke had written for the UFZ Leipzig during the Pacific expedition. Each group got to know a different piece of scientific research equipment and a member of the scientific or ship's crew.



One focus of the analysis was to **identify metaphors** from the text and image sources through personal associations that could be suitable for the development of an artwork in the next phase of the project - comparable to Kroke's chameleon metaphor, which the students had learned about at the very beginning of the project via the Zoom conference (see p. 3).



Metaphorical transformations: Instead of the scientific instrument (CTD Rosette), a spider rappels down from the research ship SONNE ("Sun"). For us humans above the water surface, it is weaving a thread of understanding and empathy into the underwater world of the Pacific Ocean.

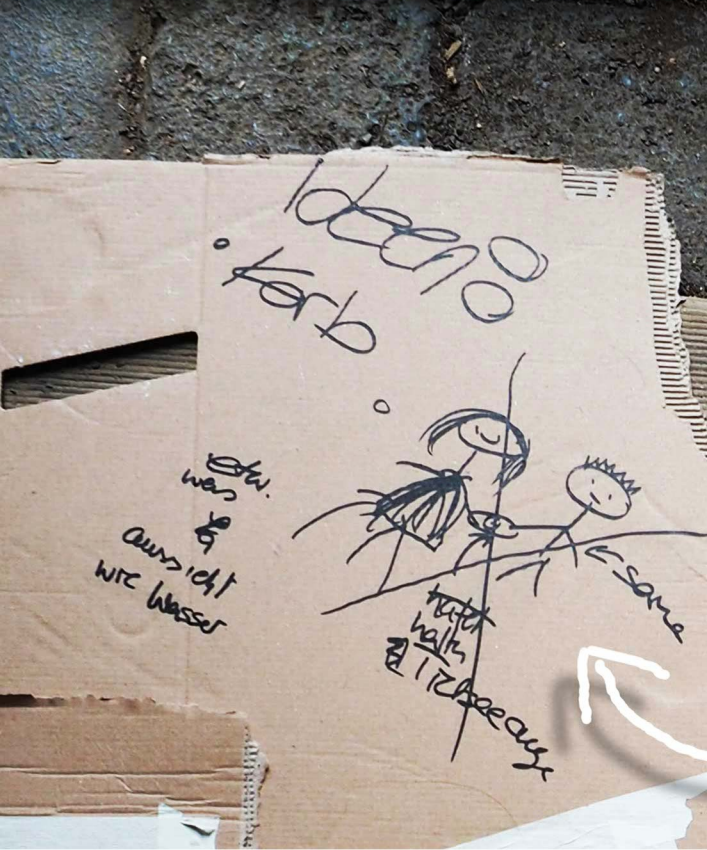


Documentation of the work process: The students also glued on the napkin with which the bluish pastel chalk nuances of the wave were obtained through wiping movements. Analogous to the scientific lab book (p. 4), they wanted to make the method with which certain effects were achieved comprehensible to third parties.

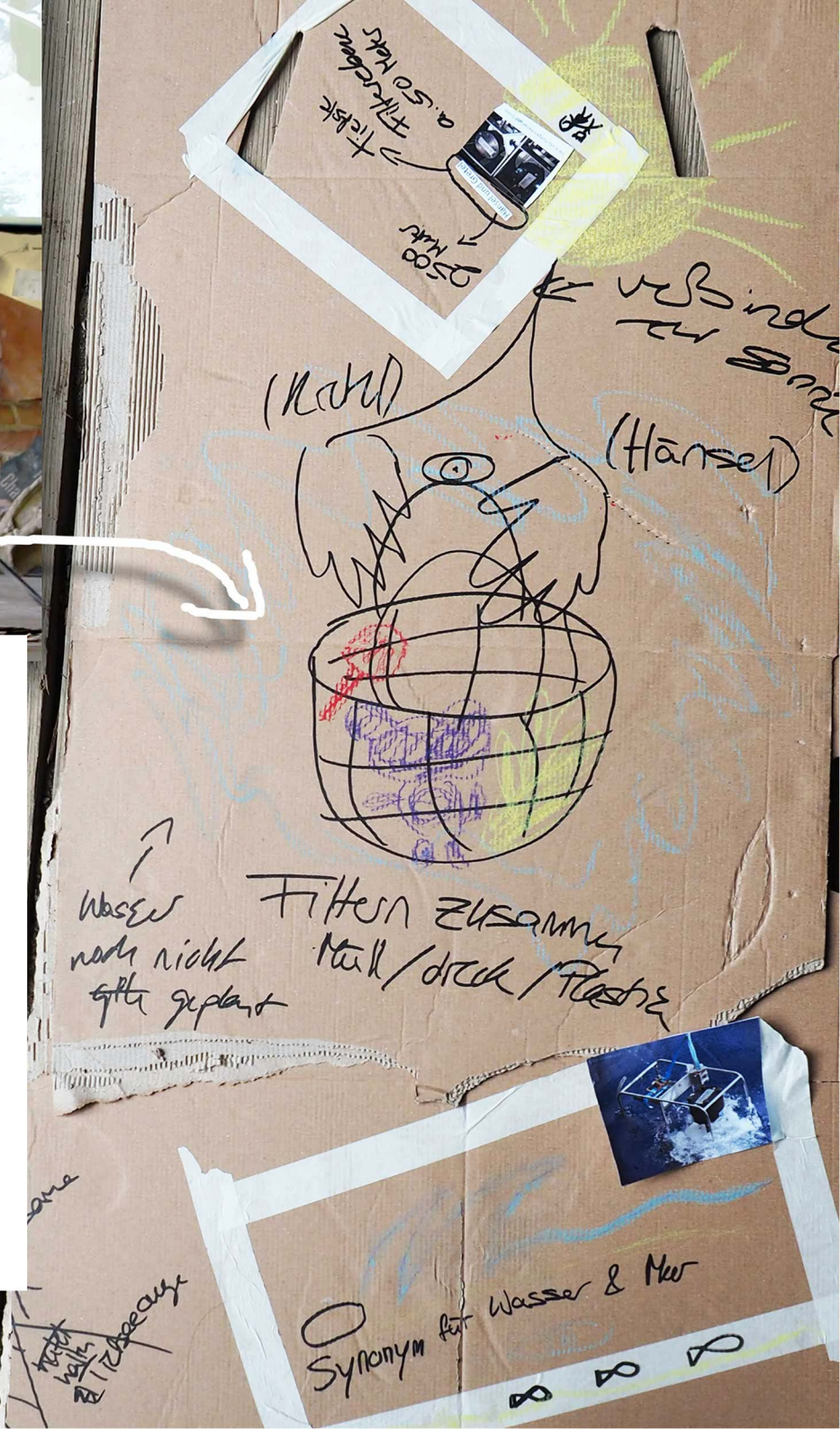


In the expedition blogs, the students learned not only about the daily work of the scientists but also about the crew of the research vessel SONNE ("Sun"). This group found metaphorical inspiration in the interview with Jürgen Kraft, the boatswain, whom everyone calls "Stöpsel" ("Plug"). He had spoken of the "soul" of the wires and that normal wires, unlike the stainless steel wire used for launching the catamaran, begin to "sing" before breaking.

The metaphor of the "complex puppeteer": With the so-called catamaran the scientists had been filtering the water surface for microplastics. The students learned that several "puppeteers" had to work together for its deployment. One of them was *Tilo Birnbaum*, 1st Nautical Officer of the SONNE. From the navigation bridge, he ensured that the catamaran was not placed directly behind the research vessel, but at a clear distance to the side. There could be particles belonging to the ship in the fairway that would falsify the results of the sampling. Moreover, in the immediate vicinity of the bow wave, there is a risk of artificial mixing of the surface water and thus distortion of the natural water column.



Following the corresponding technique in the scientific lab book, the students crossed out discarded ideas in such a way that the **winding solution-finding process** would still be comprehensible for the exhibition visitors later on. This group had discussed different metaphorical possibilities for representing the division of labour between the two in-situ pumps, "Hansel and Gretel".



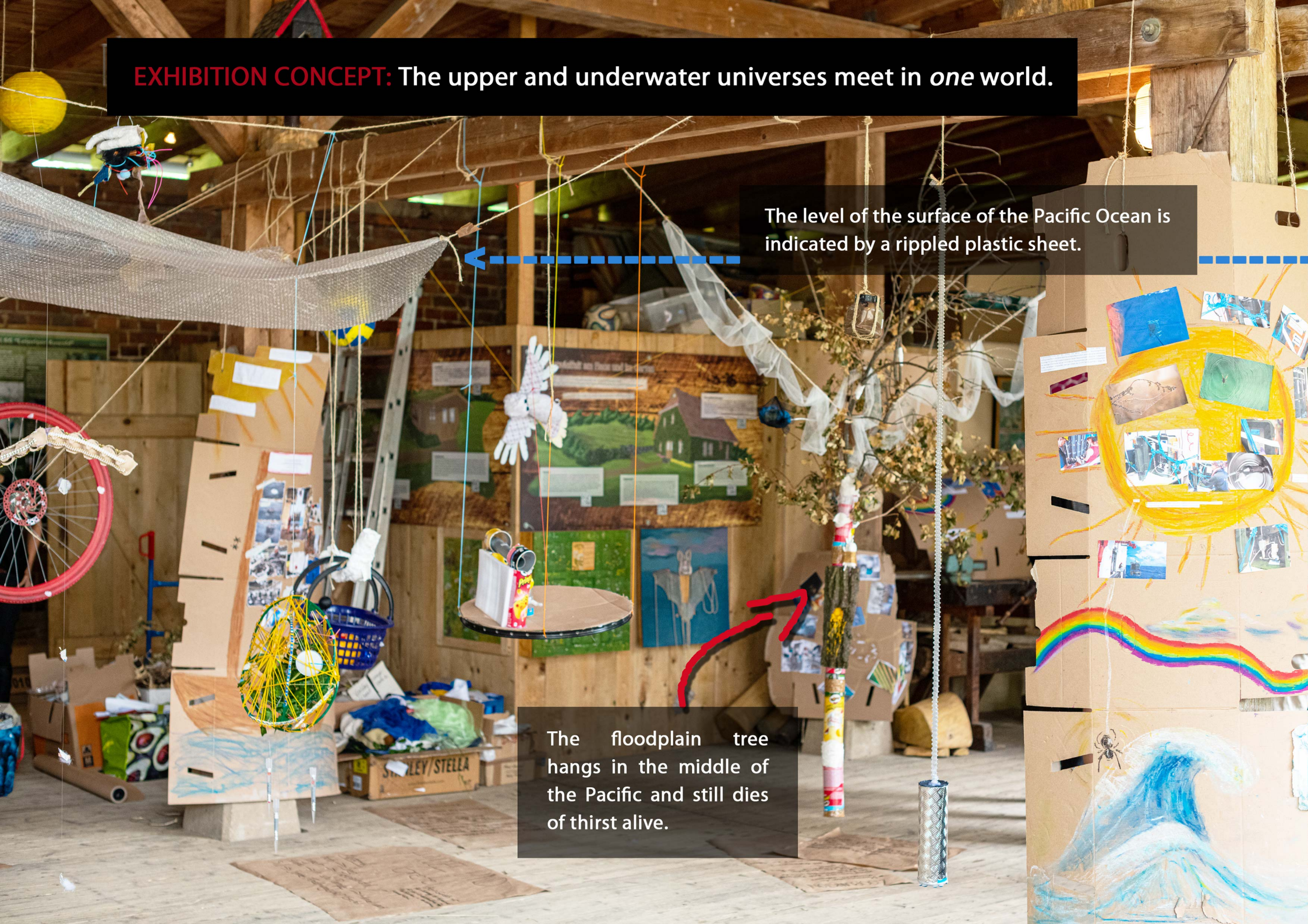
At the end of this workshop phase, each group presented their analysis results of the expedition blogs, in **scientific** and **artistic-metaphorical** terms.



EXHIBITION CONCEPT: The upper and underwater universes meet in *one* world.

The level of the surface of the Pacific Ocean is indicated by a rippled plastic sheet.

The floodplain tree hangs in the middle of the Pacific and still dies of thirst alive.





Consequently, the visitors of our exhibition were walking on the seabed, entirely immersed into the aquatic world.

You may wonder why a white magpie is flying through the underwater world of our Pacific Ocean ...





... or why a witch's house with Hansel and Gretel is dangling 50 metres below the water surface.

In the following chapter you will find a detailed presentation of the students' artworks with their concept explanations in the style of an "artistic lab book" (see page 4 of this PDF):

