

Sustainable Filmmaking

Case Study

October 2025



"Glitch"

EKOFILM

SUSTAINABLE PRODUCTION PLATFORM



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Beginning...

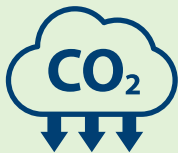
Environmentally friendly, or sustainable, filmmaking practices have long been an integral part of film production worldwide, particularly in the largest film industries, where they have also been shaped by national regulations.

As in other industries, the primary foundation of these practices is emissions measurement based on globally recognized standards and expressed in carbon dioxide equivalents (CO₂e).

To present the achievements of exemplary practices in Türkiye more concretely, the data we use consist of “approximate” results derived from comparing information provided by productions with national data and reference values used in global studies. Since carbon footprint and other emissions calculations depend on numerous variables, they inherently provide “approximate” and “average” figures. With this in mind, we begin by sharing more “accessible” equivalents of some key baseline values.



Glitch



reduced total carbon emissions by around **40%**.



prevented the waste of **280 plastic bottles**.



prevented the waste of **540 disposable cups**.



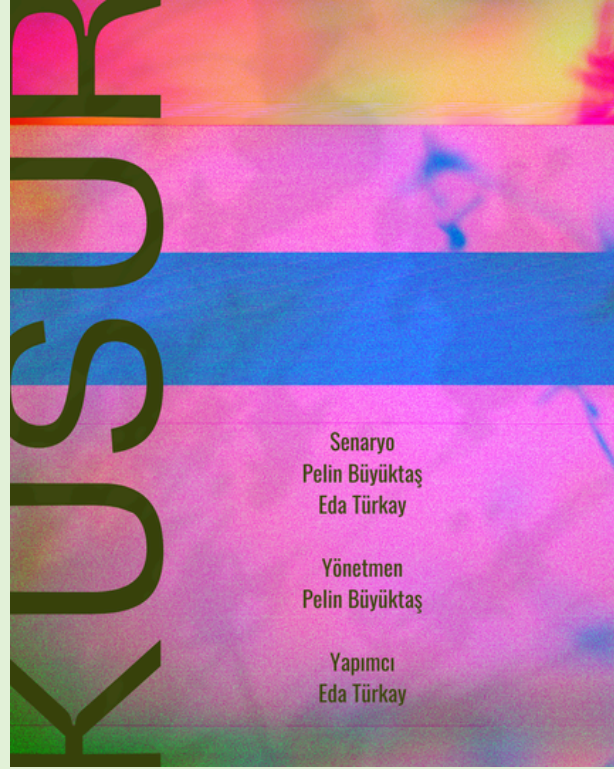
saved **9 kWh** of energy by preventing the use of 240 sheets of paper.



reduced the food and drink-related carbon footprint by 92% by choosing plant-based meals.



achieved approximately **90%** electricity savings through the use of LED bulbs.



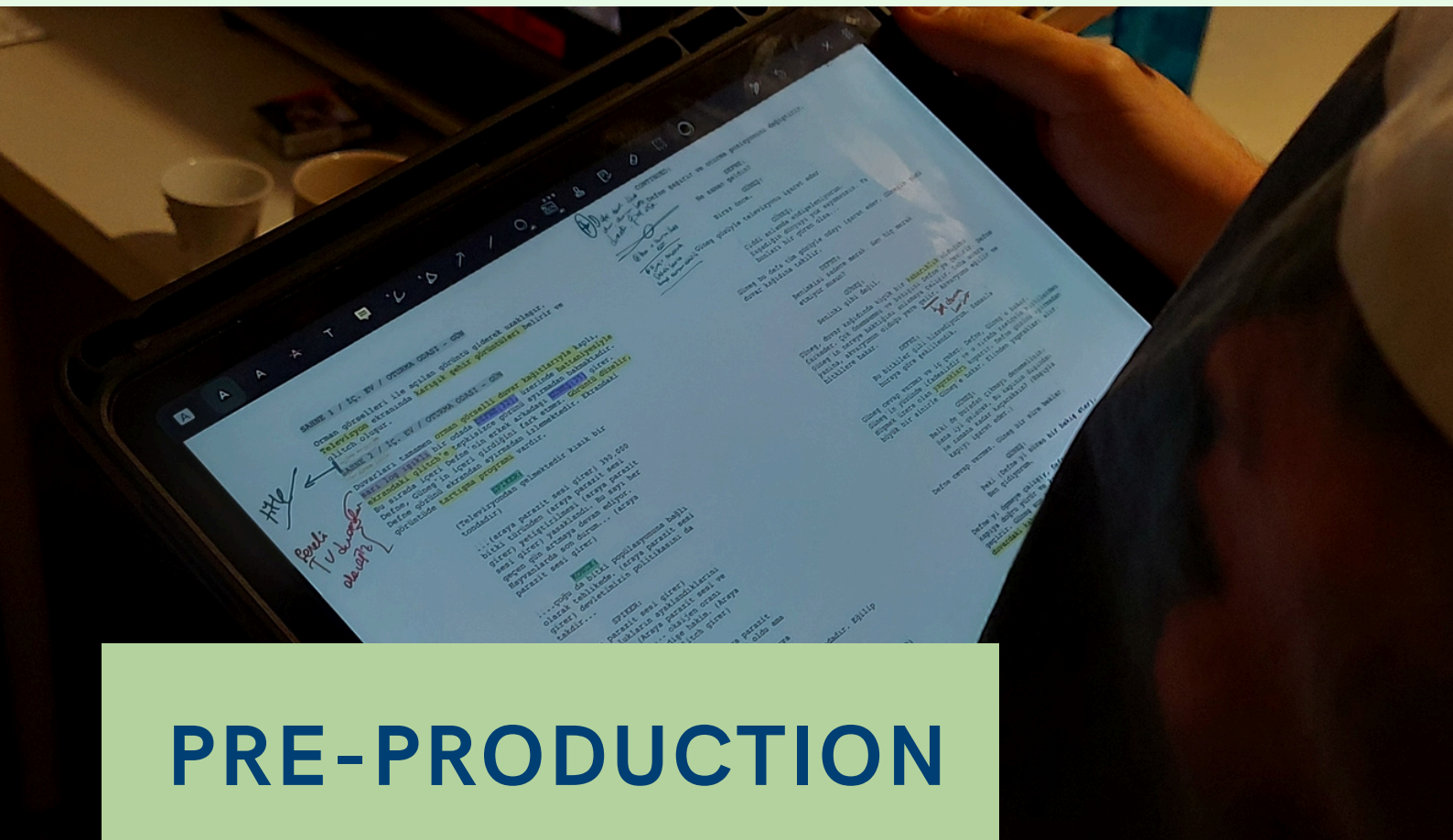
Born from the notion that freedom is inherently abstract and fluid, *The Glitch* (Kusur) interrogates the very existence and feasibility of the concept itself. The narrative is steeped in the ambiguity between reality and imagination, beginnings and endings, and fear and hope. This uncertainty is explored through the lens of the ecological crisis, the impasses in human relationships, and the complex bond between humanity and the natural world.

Set within a timeless, parallel dystopian universe, the film follows Defne, who spends her days alone at home watching television. Having spent her time immersed in documentaries, she has transformed her living space into a synthetic sanctuary, filling every corner with plants and covering her walls with forest-motif wallpaper. While watching a program, Defne notices a slight imperfection in the wallpaper and attempts to rectify it, striving to restore its "flawless" appearance. However, her efforts backfire, causing the flaw to expand until the paper tears open. As sunlight streams through the rift, Defne—who has long been severed from the outside world—finds herself caught in a psychological tug-of-war between her internal isolation and the external reality leaking in.

Glitch, winner of the Best Project award in the Film Lab National Category at the 24th İzmir Short Film Festival, is a semi-experimental short film completed in May 2025. Shot in Istanbul and produced by Eda Türkay, with direction by Pelin Büyüktaş, the film was made over two days with a 30-person crew. The first day focused on interior house scenes, while the second day was dedicated to scenes in the forest.

Director Pelin Büyüktaş and producer Eda Türkay aimed to minimize the film's environmental impact from the very early stages of project development. Concerned by the excessive waste they had encountered on previous sets, the team began searching for more sustainable production methods with the goal of creating a greener film set. This process led them to collaborate with the EkoFilm Platformu, and an orientation period started approximately one year before filming began.





PRE-PRODUCTION

During the team selection process, particular attention was given to candidates' willingness to engage in a sustainable production workflow.

From the outset of their involvement and throughout pre-production, crew members were introduced to sustainable set practices. The guidelines of the EkoFilm Platformu were shared, along with examples of previous sustainable productions. Each department was also consulted individually.

In pre-production, various sponsorship agreements were established to help reduce on-set waste and to achieve cost savings within the production budget.

Reusable water bottles were provided by **SuCo**, reusable coffee cups by **Wastespresso**, and reusable straws by **Cen Cam**.



The directing team was informed that no printed materials would be used and that all script development would take place digitally.



The camera and lighting crew were briefed on the goal of minimizing electricity consumption through the use of LED lights and rechargeable batteries.



The art department was briefed to design and execute production elements with minimal waste.



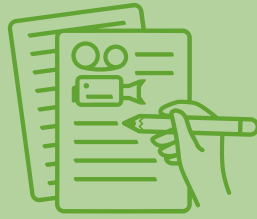
The sound team used rechargeable batteries, the set crew handled waste management planning, and the production team worked to reduce vehicle use through more efficient logistics.



The goals related to catering and transportation were shared with the entire team, and it was agreed that these practices would be followed on a voluntary basis.



All pre-production work was carried out entirely in digital form; where printing was unavoidable, scrap paper was used to minimize waste.



EDITORIAL

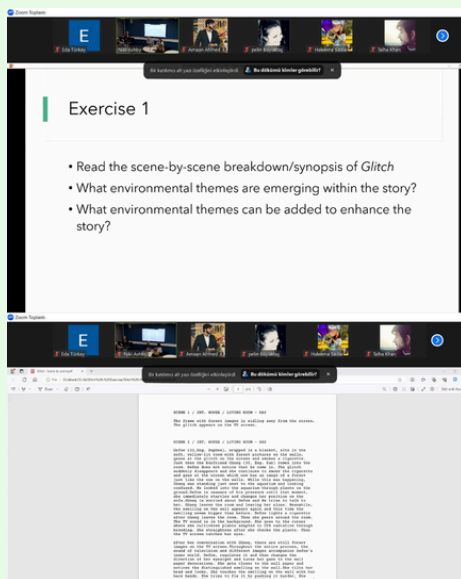
Script analysis was also carried out from an environmentally conscious perspective as part of the sustainable pre-production process. Without compromising the story's originality or creative intent, the team explored possible adjustments that could support more sustainable production practices and strengthen the film's environmental awareness through its narrative.

This work was further supported by a workshop involving instructors and students from **Brunel University London, in collaboration with the EkoFilm Platformu** as part of an ongoing project. Brunel University, a **BAFTA albert Consortium training partner** and a leading institution in sustainable filmmaking in the UK, hosted a session dedicated to analysing the script of *Glitch*. The workshop included a preliminary carbon footprint assessment of the film and helped identify areas with higher environmental impact.

The assessment was carried out by comparing BAFTA albert's carbon calculation tools with those of the EkoFilm Platformu. The session also focused on discussing practical ways to reduce the film's carbon footprint and overall environmental impact.



A significant part of the workshop was dedicated to sustainable content production, with a particular focus on recommendations related to set design and the use of props.



✓ The creative team discussed a smoking scene based on suggestions from the workshop. They considered whether removing it would affect the meaning of the story and compared this with its environmental impact. In the end, they decided to remove it from the script.



EDITORIAL



Similarly, the script originally planned to use materials such as eggshells, broken glass, wood fragments, and bones in insert shots. However, after script development work, the team decided that similar meanings and emotional effects could be achieved through alternative imagery, and by using stock footage where necessary, without generating physical waste.



The team also discussed whether the fire scene in the script should be filmed in real life or created in post-production using CGI. After considering the energy use and environmental impact of both options, they decided to remove the scene and represent it only through distant smoke instead.





FILMING



WASTE MANAGEMENT

During production, an effective waste management system was implemented, guided primarily by the principles of prevention and reduction. This applied to areas such as paper use, set construction, technical equipment, and food and beverage supplies.

- ✓ Cast meetings and rehearsals were held in home settings, helping to avoid the waste that would have been generated in external venues.
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- ✓ The wallpaper used in the set design was made of heavy-duty tarpaulin material, so it was later donated to animal shelters to be reused in building cat and dog houses. The remaining pieces were also stored for future donation.
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- ✓ Second-hand costumes were given to the actors as gifts.
-

- ✓ Leftover materials from set construction—such as tape, packaging, labels, wood, and silicone—were collected and returned to the team for future use.
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WASTE MANAGEMENT

✓ The moss used during the shoot was repurposed as part of the set decor and turned into small plant terrariums inside jars, which were then gifted to the film crew.



✓ Waste was sorted into paper, plastic, metal, glass, and organic categories using color-coded bags, and then disposed of in local recycling bins provided by the municipality.



✓ Rechargeable batteries were used, helping to eliminate battery waste.



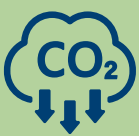


WASTE MANAGEMENT

Before filming, the team secured sponsorship agreements that replaced single-use plastic water bottles with **reusable bottles provided by SuCo**. **Wastespresso** supplied **reusable coffee cups** made from upcycled coffee grounds, and **Cen Cam** provided **glass straws**. These reusable items helped eliminate plastic waste on set.



The use of **approximately 280 plastic bottles** and **540 single-use cups** was avoided.



The avoided **32 kg of carbon emissions** is roughly equivalent to **two weeks of electricity use per person** in Türkiye, 80 kg of waste produced, or a 192 km car journey.



An estimated **75% of the budget** was saved on drinking water supply alone.

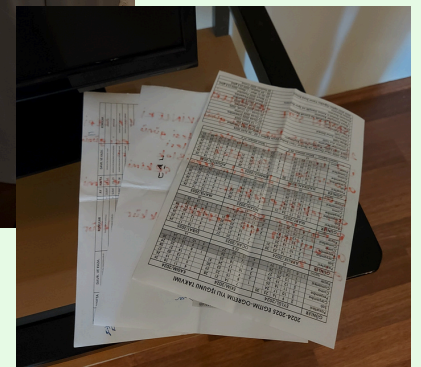
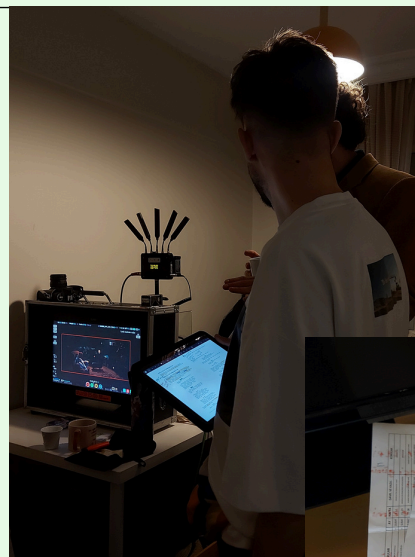


WASTE MANAGEMENT

✓ In cases where paper use was necessary — such as warning notes for set setup — **scrap paper** was used instead.

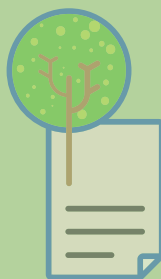
✓ **Only one hard copy** of the script was printed for the assistant director, and after filming, it was repurposed as scrap paper.
✓ Call sheets were not printed and were instead **shared digitally** with the crew.

The use of approximately 240 sheets of paper was avoided, leading to an estimated energy saving of around **9 kWh** — equivalent to the average daily electricity consumption of a household in Türkiye or about 90 hours of computer use.

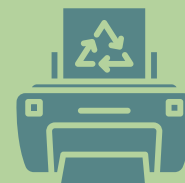




WASTE MANAGEMENT




On average, producing **1 ton of paper** requires about **24 trees** to be cut down, which corresponds to approximately **200,000 A4 sheets**.





When paper use is unavoidable, using **recycled paper** helps reduce the use of natural resources and energy in the production process.

Producing 1 ton of paper from **recycled materials** can prevent the cutting of about 17 pine trees, the consumption of 1,750 liters of fuel, and the waste of 38.8 tons of water.



 During the pre-production stage, meals were prepared at home, helping to avoid packaging and food waste.

 Vegetarian meals were prepared for the filming stage, and home-cooked food contributed to higher crew satisfaction.

 To minimise food waste, portions were served according to individual preferences. Drinks were offered in reusable containers such as water dispensers, pitchers, and glass bottles, and reusable cutlery, plates, and utensils were used instead of single-use items.



By **avoiding meat consumption**, the carbon footprint associated with food and beverage was reduced by approximately **92%**.



COSTUME, MAKE UP, SET CONSTRUCTION

The crew followed a “**less purchasing and reuse**” approach for costumes, makeup, and set construction materials, choosing **second-hand items** whenever possible and **eco-friendly products** where necessary.



Costume planning prioritised using clothing already available in the actors’ own wardrobes, while any necessary additional items were sourced from second-hand stores.



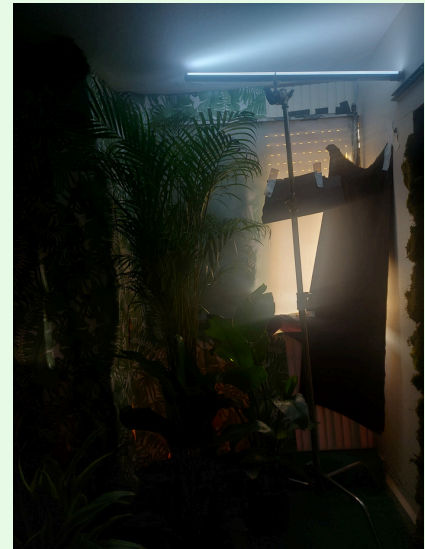
During pre-production and on-set activities, makeup and cleaning products were carefully selected, prioritising **eco-friendly, cruelty-free, and naturally formulated options**.

The purchase of industrial materials used for set construction—such as tape, packaging, labels, wood, and silicone—was kept to a minimum.



ENERGY EFFICIENCY

By minimising the use of **LED lighting indoors**, an estimated **90% reduction** in electricity consumption was achieved.



The indoor location, easily **accessible by metro**, reduced the crew's reliance on vehicle transport.



When a production vehicle was used, trips were minimised by planning for multiple crew members to be transported at the same time.



ENERGY EFFICIENCY



For the outdoor filming in a forested area, natural daylight was used, significantly reducing energy demand.

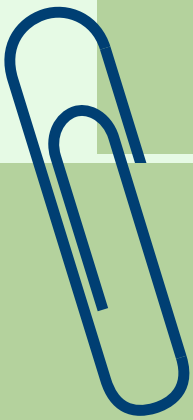


As part of the sustainability review of the script, the fire scene was removed and instead represented through smoke alone. Instead of using a fuel-powered smoke machine, smoke was created by burning sage and using a bellows. A similar method used in Reha Erdem's **Neandria** (2023), which was produced with sustainability principles, served as inspiration for the team.

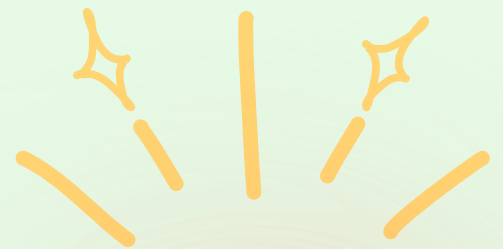




POST-PRODUCTION



During pre-production and production, the crew entered all collected data into the **EkoFilm Platform carbon footprint calculator**. The resulting emissions were then compared with a baseline scenario in which no sustainability measures had been applied, allowing the overall reduction achieved to be calculated. Electricity and budget savings were also assessed, along with waste prevention rates and their equivalent impacts.



Through sustainable production practices, the crew reduced its total carbon emissions by approximately 40%.

With the measures implemented, **approximately 270 kg of carbon emissions** were avoided over two days of filming, equivalent to



1,620 km of travel in a petrol-powered car



The disposal of 675 kg of household waste



Three months of per capita electricity consumption in Türkiye.



The production of 2.7 kg of red meat

ADVANTAGES AND CHALLENGES

In the case of "Glitch"



The process was more challenging for the production team. Although a person was assigned to monitor the practices, the introduction of new routines sometimes led to minor disruptions.



Portable power sources were explored, but they were considered too risky due to their limited availability and untested capacity. As a result, a generator was used for the toilet caravan.

ADVANTAGES AND CHALLENGES



Despite the challenges arising from the industry's still-limited alignment with sustainable practices, the team's strongest motivation came from their belief that these obstacles can be overcome.



The crew's initial concerns about sustainable practices shifted positively through experience and collaboration. It was also commonly agreed that the challenges come from the industry's drawbacks and that further development within the sector is necessary.



From the crew

“Even on a short film set lasting just two or three days, we could see how much environmental impact was generated, which made us uncomfortable when we thought about larger productions. In the end, we felt we had to start somewhere. Looking at a few examples in Türkiye, we decided to build a sustainable set. These early cases showed us that the challenges created by the industry’s lack of alignment with sustainable practices can be overcome, and that really motivated the team. We hope that, with future examples, sustainable set-building will become easier and eventually turn into a standard practice—something that is simply ‘how things are done.’”

Eda Türkay - Pelin Büyüktaş

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Pelin Büyüktaş

Resources

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