European Booklet for
Green Productions

GREEN TOOLKIT FILM & TV

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Introduction

This Booklet is the result of a project born from the framework of the European Social Dialogue in the audiovisual sector. The European Social Dialogue refers to discussions, consultations, negotiations and joint actions involving organisations representing both sides of the industry (employers and employees). It takes two main forms: a tripartite dialogue involving public authorities, and a bipartite dialogue between European employers' and workers' organisations. It takes place at an interprofessional level and within the sectoral social dialogue committees.

Financial support is provided for transnational projects carried out by social partners and others active in the field of industrial relations through the social dialogue budget lines. It is also provided through the European Social Fund (ESF) for the capacity building of social partner organisations at a national level.

The EU's audiovisual sector (public and commercial broadcasting, independent television and film production) employs around 700,000 people in more than 130,000 companies.

These workers and employers are represented in the EU by organisations that have been involved in the process of drafting this Booklet.

In line with the priorities of the European Social Dialogue Committee in the audiovisual sector, this Booklet is the result of the joint willingness of social partners, both employers and employees, to work towards a more environmentally sustainable audiovisual industry. The information contained in this publication is the result of an EU-wide mapping of established environmentally sustainable practices already in use in the European audiovisual ecosystem. The aim of this booklet is not to propose a single methodology for managing sustainability aspects in film and TV productions, but rather, to highlight the key points for reducing environmental impact in line with identified established practices used in the audiovisual industry that meet the objectives of the European Green Deal, making Europe the first carbon neutral continent by 2050 (details of the European Green Deal are explained in Chapter 2.1 of this Booklet).

1.1. The project

This booklet was developed within the framework of the EU-funded project *"Strengthening capacities of social partners to meet the challenges of environmental sustainability in film and TV productions"* with the aim of facilitating the adoption of environmentally-sustainable working practices in European audiovisual productions in line with the objectives of the European Green Deal, which emphasises the importance of an active social dialogue to help anticipate and successfully manage environmental challenges. The organisations involved in the project represented workers via **UNI Europa/UNI MEI**, the media, entertainment and arts section of UNI Global Union, **FIA**, the International Federation of Actors and **FIM**, the International Federation of Musicians, and represented employers via **CEPI**, the European Audiovisual Production Association, **EBU**, the European Broadcasting Union and **FIAPF**, the International Federation of Film Producers' Associations. These organisations are recognised as partners in the European social dialogue, as they are organised at an EU-wide level and participate in consultations and negotiations on agreements. Furthermore, they represent a large proportion of EU Member States, while their national members are recognised as social partners in their respective countries. Since 2006, the EU agency in charge of researching living and working conditions, Eurofound, has been carrying out representativeness studies.

The project, which ran from February 2021 to May 2023, started with a mapping exercise aimed at collecting different public and private initiatives in EU Member States for sustainability in the audiovisual sector. The overall objective of the project was to increase the capacity of social partners and organisations operating in the European audiovisual sector in relation to environmental sustainability, in line with the objectives of the European Green Deal. The project published a website that brings together information, tools and practices for environmental sustainability in the EU (greentoolkit-filmtv.eu), organised two workshops in Brussels and Tallinn, two capacity building webinars and a final conference that fuelled debate and reflection on sustainability in the audiovisual sector. The project involved different stakeholders from the sector, including EU national social partners, audiovisual production companies and sectoral associations; it was coordinated by a Steering Committee representing the partner organisations with the expert support of a group of experts nominated by social partners from different EU countries.
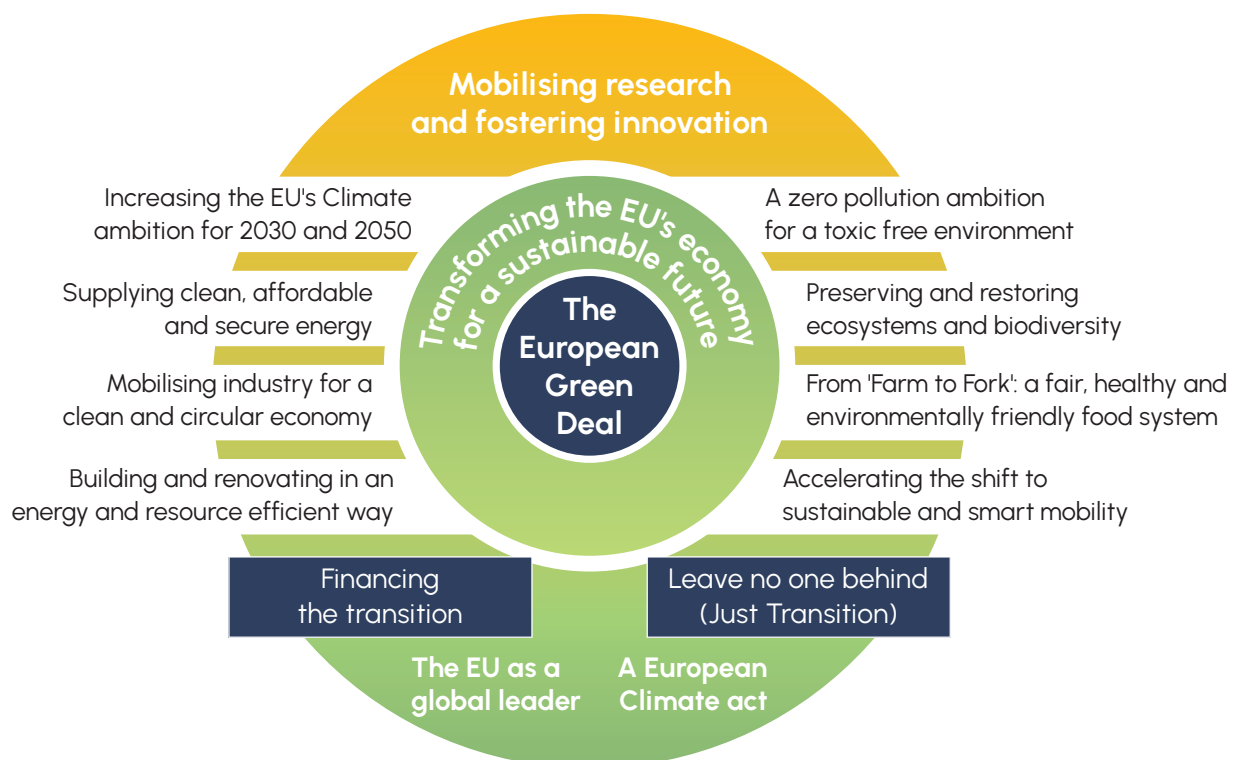
Political basis

2.1. The European Green Deal

In December 2019, the European Commission published the European Green Deal Roadmap [1] as an integral part of the strategy to implement the UN 2030 agenda and the Sustainable Development Goal [2].

Source: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS – The European Green Deal [3]

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1. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
2. https://sdgs.un.org/2030agenda
3. https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF

The Agreement illustrated above aims to transform Europe into the first carbon neutral continent by setting out two main milestones:

• Cut carbon emissions by 50% by 2030 compared to 1990

• Achieve carbon neutrality by 2050

A key element in achieving this objective is a strong dialogue with the social partners and the key fundamental principles of the European Pillar of Social Rights, *ensuring* - as stated in the European Green Deal - *that no one is left behind.*

AS ILLUSTRATED IN THE FIGURE ABOVE, THE EUROPEAN GREEN DEAL FOCUSES ON 7 KEY PRINCIPLES:

1. Clean energy
2. Smart mobility
3. Zero pollution
4. Toxic-free environment
5. Fair, healthy and environmentally-friendly food system
6. Preserving and restoring ecosystems and biodiversity
7. A circular industry/economy

These principles aim to decarbonise the energy system, establish a circular economy and a digitisation action plan with reliable, comparable and verifiable information to avoid "greenwashing", achieve energy and resource efficiency, reduce the environmental impact of transport through smart mobility, reducing the use and risk of chemical pesticides, fertilisers and antibiotics in the food chain and stimulating sustainable food consumption, effective afforestation, preservation and restoration of forests to protect biodiversity and a pollution- and toxin-free environment, including a chemical strategy for sustainability.

Every productive sector will be called upon to contribute to the achievement of these objectives, but what are the specificities of the audiovisual sector?

2.2. Greening the European audiovisual industry

In June 2021, the European Commission published the commissioned study "Greening the European Audiovisual Industry [4]", which proposed a series of recommendations for greening the European audiovisual industry, focusing on three main pillars:

- *Savings in consumption and therefore immediate cost savings, which will be used to refinance projects, people and companies.*

- *Investments in green technologies that will create new businesses and employment opportunities.*

- *Positive effects, new demands and spill overs to other industries create a beneficial "green domino effect" in terms of business volume, innovation and new business developments.* [5]

Fig.2 – Policy suggestions of the study on the greening of the European audiovisual industry

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4. https://digital-strategy.ec.europa.eu/en/library/greening-european-audiovisual-industry

5. Study: Greening the European Audiovisual Industry, the best strategy and their costs, Philip Gassmann and Marie Gouttefarde - LINK

More specifically, the recommendations illustrated above include:

- **raising awareness** at all levels of the sector to change behaviours and habits and share best practices.

- creating **incentives** for the sector to become more engaged and make an extra effort

- creating a system of **consistent and comparable data** to monitor the impact of industry, including a common system for calculating carbon emissions from production activities

- establishing **unified rules and guidelines** to achieve a European standard for sustainable audiovisual productions.

- training the industry and creating specific curricula in academies, universities and training centres to create an **equal** level of **knowledge** about sustainability in Europe.

- providing funding and investment to technical suppliers of green technologies that play a key role in reducing CO_2 emissions to deliver better and **more technologically advanced tools**

- developing **new green technology standards** to promote a rapid sustainable transition.

> **THESE RECOMMENDATIONS ARE INTENDED TO HAVE AN IMPACT ON THE AUDIOVISUAL INDUSTRY AT MANY LEVELS:**
>
> 1. Emission and consumption reduction
> 2. Improvements in technological efficiency
> 3. Technology changes and acquisitions
> 4. Improvements in behavioural efficiency and workflows
> 5. Changes in creative workflows
> 6. Changes in production design

This study and its recommendations represent a solid basis that will inevitably have an impact on the future of the European audiovisual industry.

Practical implications
for the audiovisual industry

It is important to note that, while the European Green Deal is starting to have an impact on all production sectors in the European Union, different local and national initiatives in the audiovisual sector have already put in place a series of regulations, measures and initiatives to stimulate the industry to adopt new sustainable and green working practices. This is the case, for example, in Germany, where the Green Filming Badge has been working as a sustainability check for the areas of development and distribution, or in Tenerife[6], where the local Film Commission is calling for the audiovisual sector to respect its 10 points of good practices to preserve the natural ecosystem and to protect the natural environment of the island, or in Italy, where the Trentino Film Commission[7] became the first regional fund in Europe to reward and certify production companies that work in a more environmentally-sustainable way, to name a few examples.

This chapter, which aims to share knowledge on greening the audiovisual industry, is the result of a European mapping project that explores existing practices in the audiovisual sector in order to address environmental challenges and improve the ecological sustainability of productions.

6. Tenerife Film Commission proposes this ten-point good practice guide to achieve sustainable film productions and a checklist to recognise your efforts and award you with our seal of sustainable production or sustainable service - LINK
7. https://www.trentinofilmcommission.it/en/green-film

3.1. The four 'R's

One of the most popular mantras for achieving sustainability in all sectors is: reduce, reuse, repair, recycle. This principle, already well known in the audiovisual industry, consists of implementing strategies to:

- Reduce the amount of energy resources used, polluting activities and waste production.
- Reuse items and equipment as far as possible before replacing them.
- Repair items that can still be reused before deciding to dispose of them
- Recycle everything that can be recycled

The 4 'R'

Reduce

Reuse

Repair

Recycle
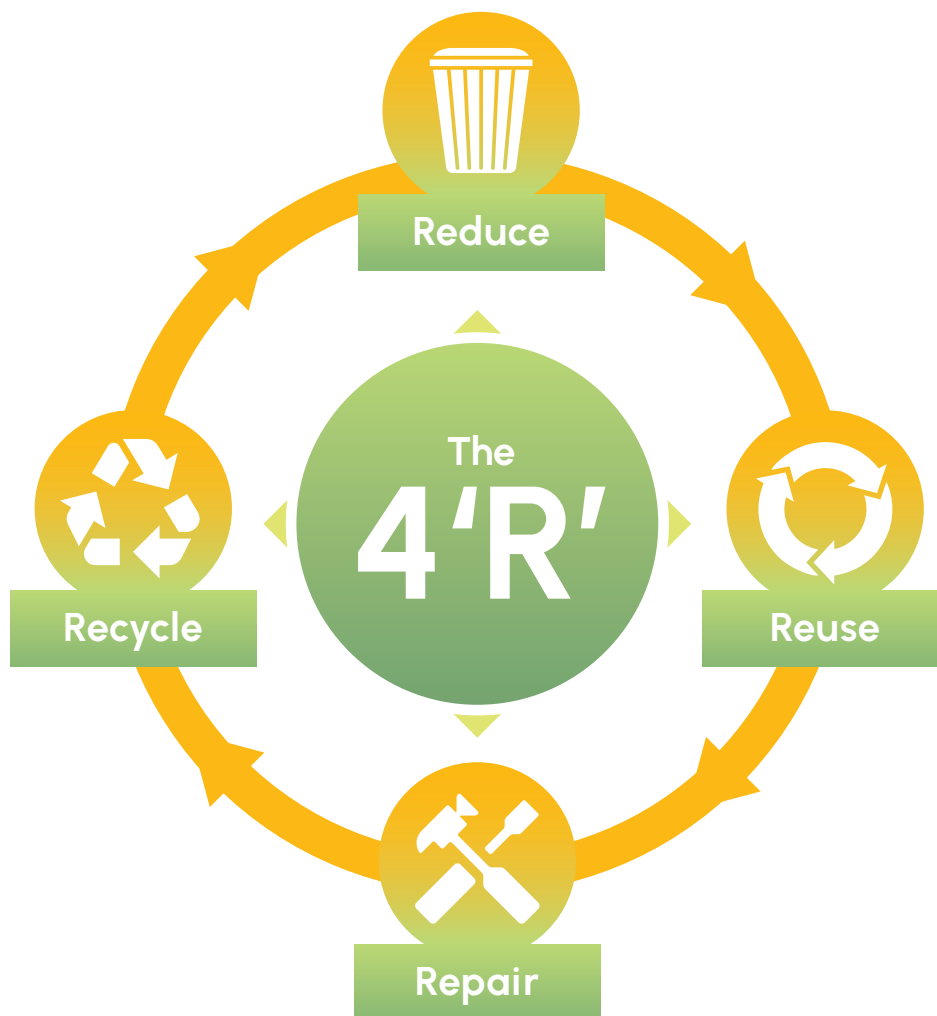
3.2. Managing environmental sustainability in audiovisual productions

The green transition is not an overnight process, and the adoption of new practices and working methods requires time, effort, financial investment and human commitment as proven by the many people in the industry (whether in EU or overseas) already involved in this transition. The transition in Europe is also reflected in public policies at both an EU-wide level and at the level of individual Member States, particularly after the adoption of the green transition as an EU priority supported by the EU Recovery package in the aftermath of the pandemic. Combined with the latter, the green transition in the audiovisual production sector is already underway and the trend will not disappear and will only amplify, especially in the context of achieving the ambitious goal of the European Green Deal to become the first carbon neutral continent by 2050. It is therefore important for all communities involved in making a film and other audiovisual productions to familiarise themselves with sustainable working practices.

Every small step towards a more environmentally-friendly audiovisual industry is important, and this section will bring together the key sustainability practices identified through a Europe-wide mapping process to propose the key elements of an environmental sustainability management plan to enable the reader to design their own step-by-step process to initiate the green transition.

THE ELEMENTS OF AN ENVIRONMENTAL SUSTAINABILITY MANAGEMENT PLAN

This figure illustrates the key elements for initiating the process of reducing the environmental impact of production.

To embrace the green transition and reach the goal of carbon neutrality, a change in behaviour and a dynamic adaptation process for a constant improvement of work practices needs to take place.

The Swedish book *Climate psychology: how we create sustainable change* offers an outline of a path that leads to changes in behaviour changes into three steps:

1. Identification as an environmental friendly person to start making sustainable choices
2. Find support in the surrounding environment
3. Build new behaviour that needs to be as simple as previous behaviour

It is therefore important to remember that the transition process towards a carbon neutral audiovisual industry is one that requires time to produce lasting changes. In a sector where a great part of the workers, cast and artists are freelancers who are on their own in the process to gathering knowledge on sustainable production, a key element is supporting them on this learning journey.

ENVIRONMENTAL SUSTAINABILITY MANAGEMENT

BEHAVIOURS CHANGE

ADAPTATION & IMPROVEMENT

AWARENESS

SET CLEAR GOALS

INVOLVE CO-WORKERS

DATA ANALYSIS/ LEARNING

ACKNOWLEDGE RESULTS AND COMMUNICATE THEM

Reduce the environmental impact

PLANNING

INFORM THE TEAM

MONITORING

MEASUREMENTS

IMPLEMENTATION

8. Klimatpsykologi: hur vi skapar hållbar förändring, Frida Hylander, Kata Nylén, and Kali Andersson, Natur & Kultur Akademisk, 2019

AWARENESS

Awareness is the key element to reduce the carbon footprint of any production activity. In this sense, the first step towards a green transition is to gain awareness and raise awareness of the environmental impact of the proposed production plan. In this process, it is important to involve co-workers: each department head should actively participate in the analysis of the specific impact of production activities in order to design an ad hoc strategy to reduce carbon emissions. It is also vital to raise the level of awareness of each team member, the cast and external suppliers.

Awareness concerns not only the environmental impact of production activities but also awareness about costs related to sustainable working practices. It is true that some measures can reduce the costs and save money, while others can constitute extra or higher costs in term of time and money. It is therefore important to be aware of these financial aspects in order to distribute the budget and avoid imbalances in the purchase power of different film departments.

Once the impact of each activity on the overall carbon footprint of production is clearly identified, a strategy can be drawn up, an activity can be chosen and a plan can be made.

PLANNING

Changing working practices to become more sustainable requires effort and commitment. Becoming carbon neutral overnight is not a realistic objective,, so once the environmental impact of each activity has been clearly identified and assessed, a choice needs to be made in terms of which activity to focus on. We advise starting with the most polluting activities and those for which alternative technologies and working practices exist and are available and practical in order to maximise effectiveness in reducing the carbon footprint. Each production is different in terms of the type of predominant activities, access to technologies, green suppliers and logistics it has, so it is important to make a specific plan for each production in order to design the best strategy to achieve a lower carbon footprint.

Once the strategy has been designed, it is important to inform the staff, the team, external suppliers and all those involved of the commitment to sustainability, the objectives to be achieved and the code of conduct to achieve them.

IMPLEMENTATION

When it comes time to implementing the sustainability plan, it is important to designate someone whose duty it is to keep a production on track in order to meet its sustainability objectives. Constant monitoring is vital to ensuring the success of the strategy and to identifying areas of weakness and/or possible improvements and hiring a green consultant is advisable for planning, research, communication and monitoring, as well as green runners to ensure the measures are constantly respected and implemented. A discussion of constant monitoring leads us to the next key element of the sustainability management system: measurement and data collection.

⬛ MEASUREMENTS

Without systematic monitoring of the impact of production and carbon emissions, it is impossible to assess the progress and effectiveness of a sustainability strategy. Moreover, at European level, it is important to have consistent and reliable data to enable the industry to better understand its overall environmental impact and to improve sustainability strategies for a greener future. In order to help production companies measure the impact of their activities, a number of different carbon calculators are available on the market. It is important to note that different carbon calculators currently estimate carbon emissions in different ways, so the final results of the overall carbon footprint may differ from one carbon calculator to another. Although the European Commission is working on a common system for calculating carbon emissions, it may be useful to choose one of the many carbon calculators on the market and stick to it in order to have consistent and comparable data.

Considering that making the audiovisual industry carbon neutral requires significant effort, it is also important to see this commitment recognised. Certifications can be useful for this purpose. It should be noted that, in certain regions (and countries), certification demonstrating environmental commitment is mandatory, and in others it is necessary in order to access public funding and support. This is a growing trend, meaning that becoming familiar with certifications is an essential step towards carbon neutrality. Different certifications are now available and the best way to find out about them is to check with the local film commission where the shooting is set to take place. There is also a growing practice in the industry to obtain international ISO certification for environmental management, as well as others that will be described in the following paragraphs.

⬛ DATA ANALYSIS/LEARNING

When data is collected, it is important to analyse the data and recognise the results, understanding where sustainability measures produce the desired results and where improvements are needed. Data analysis should be carried out in cooperation with co-workers and heads of department. It is important to look back at what has been achieved, analyse it and subsequently set new and clear targets to help start the process again until the goal of carbon neutrality is reached.

3.3. Key practices for environmental sustainability in the audiovisual industry

In addition to the mantra of reduce, reuse and recycle, the audiovisual sector has proven to be very sensitive to the issue of sustainability and numerous initiatives and practices have already been explored by different organisations across the Union. While a database of European initiatives is available on the greentoolkit-filmtv.eu website, below is a description of the main areas of sustainability intervention in the audiovisual sector based on existing practices mapped in the European Union. This is a catalogue of possible actions aimed at inspiring professionals and at helping productions progressively reduce their environmental impact. It is of course understood that the capacity of productions to adopt green practices vary greatly, and that ad hoc policies and support will continue to be needed in the coming years to achieve a lasting impact.

STUDIOS & OFFICES

Studios, offices and buildings are key elements in reducing the impact of productions. Many pre-production, production and post-production activities take place in buildings where environmental conditions are easier to keep under control in a standardised way. Careful choice of premises is a crucial element that will have an impact on energy consumption, logistical and transport needs, recycling, reuse and disposal of equipment, waste management, accessibility by bicycle or green (public) transport, access to sustainable suppliers, and much more. During the planning phase of any production, the choice of premises is crucial to having a major impact on your carbon footprint.

KEY ELEMENTS TO CONSIDER

BUILDINGS

- Choose premises supplied by green energy and classified as energy efficient
  (the European Energy Performance Certification EPC gives a score from A to G to assess the energy performance of buildings. Some premises also have the ISO 50001 – Energy Management system Certification to proof their energy efficiency standards)

- Choice of premises and locations to minimise the transportation of people, equipment and materials
  (locations and premises should be easily accessible by environmentally-friendly transport and not too far away from crew and suppliers)

- Easy access to local and environmentally-sustainable suppliers

- Easy access to an efficient waste management system

- Presence of infrastructures such as charging stations for electric vehicles

- Secure parking for environmentally-friendly transport such as bicycles, scooters, etc.

- Establishment of an environmental sustainability management system

- Clear and visible indication of environmental sustainability procedures on the premises

- Keeping up-to-date with new technologies to reduce environmental impact

OFFICE SUPPLIES

- Creation of an office recycling scheme

- Evaluate whether printing is really necessary before doing so

- Set duplex printing by default

- Set low ink consumption as the default printing method

- Print scripts only when strictly necessary and prefer digital distribution to equipment and delivery

- Check with the printer manufacturers about the possibility of recycling ink cartridges

- Choice of recycled paper

- Reuse of wrongly printed sheets as note paper

TRANSPORT, TRAVEL and ACCOMMODATION

Transport and travel are among the most polluting activities in connection with the film industry. Travel is in the industry's DNA which, for logistical or artistic reasons, needs to move to different locations and accommodate crew and cast. Furthermore, transporting equipment, sets and props is part of the daily journey of any audio-visual production. Travel, transport and accommodation not only affect production activities, but also planning and pre-production. Optimised logistics therefore play a key role in reducing the carbon footprint of audiovisual productions.

KEY ELEMENTS TO CONSIDER

TRAVEL

- Prefer means of transport with low or no environmental impact
  (*electric/biogas/hybrid cars, public transport, trains, etc.*)

- Prefer trains over planes
  (for short journeys (less than 500 km), trains have on average a 75% to 90% lower carbon footprint than planes)

- Plan private transport journeys in advance, taking into account the length of the route and the traffic
  (carefully choosing the shortest route at pick-up times can reduce energy/fuel consumption and travel time)

- Encourage and organise car sharing/carpooling
  (organising car sharing will reduce the number of vehicles on the road and therefore reduce CO_2 emissions and energy/fuel consumption)

- Reduce face-to-face meetings to those that are only strictly necessary and encourage/ give preference to videoconferencing
  (virtual meetings can often be as effective as face-to-face meetings, if not more so, as they allow for greater flexibility and more efficient time management)

- Choice of local equipment, delivery, technicians and contractor to minimise staff travel
  (refer to local film commission or film agencies regarding the hiring of local staff and contracting local suppliers)

- Follow-up and monitoring of trips to analyse areas for improvement
  (systematically monitor trips and periodically analyse the data collected to improve efficiency and minimise travel)

- Incentivise staff to use a low- or zero-emission travel system
  (there are many eco-responsible solutions, such as bicycles, bike sharing, car sharing, scooters, electric vehicles, public transport, etc., which are preferable to private cars or fuel-powered vehicles).

- Consider carbon offsets when travelling by high environmental impact modes of transport such as air travel
  (it is not always possible to choose low or zero impact transport, so when these are unavoidable, it is good practice to offset carbon emissions. There are different organisations that help to offset the carbon footprint)

- Also take the financial aspects of travel into consideration during pre-production phase
  (if you are unable to hire local cast and crew, consider not having multiple production locations in different countries/regions just for the sake of accessing certain nation/regional funding in order to avoid unnecessary international/inter-regional travel)

TRANSPORT

- Choose green transport
  (this includes a preference for electric, biogas or hybrid cars, and the use of bicycles and cargo bikes, or other electric vehicles)

- Staff training and application of eco-driving principles
  (the application of eco-driving principles can reduce fuel consumption, carbon emissions and the risk of vehicle wear and tear)

- Carefully plan the most efficient way to move equipment and personnel to reduce environmental impact

- Track mileage and fuel consumption to improve transport efficiency

- Choose zero-emission transport for local daily commuting of people and equipment
  (there are different options available, including small electric cars, cargo bikes, scooters, drones, solar powered vehicles, etc.)

- Make a preference for renting transport overbuying, and take the logistics of vehicle charging into account when choosing electric means of transport

- Consider creating incentives such as interest-free-loans or rewards for eco-friendly transport options

ACCOMMODATION

- Make a preference for rented flats over hotels
  (hotels generally have a higher environmental impact than regular housing, such as flats)

- Choose accommodation with environmental policies in place or with a certificate
  (certain responsible tourism certificates can be proof of the host's consideration of environmentally-friendly initiatives)

- Carefully select accommodation closest to the shooting locations
  (this will reduce travel time/distance, resulting in a reduction in energy/fuel consumption, lower carbon emissions and more efficient time management)

- Create a sustainable commuting plan
  (draw up an efficient travel plan in advance so that equipment, delivery and anyone else involved in production can have a major impact on reducing carbon emissions)

⚡ ENERGY

Energy often has a large impact on the carbon footprint of a production, with all departments of the film being affected. Attention needs to be paid to energy sources, consumption and efficiency at every stage of production. Particular attention should be paid when shooting on location or on an outdoor set with no connection to the electricity grid or another energy supply. Although energy is an integral part of every production activity, there is little or no awareness of energy consumption, meaning an awareness strategy for every person involved in a production can be helpful for reducing consumption and waste.

KEY ELEMENTS TO CONSIDER

ENERGY CONSUMPTION

- Pay special attention to the energy efficiency certification or label when purchasing or renting equipment
  (the European energy rating system uses a scale from A to G to classify the consumption of many common appliances such as screens, portable heaters, lightbulbs, refrigerators, etc.).

- Monitor energy consumption and set clear energy saving targets
  (being aware of energy consumption is one of the best ways to avoid waste)

- Do not leave fully charged devices plugged in and/or use technology to optimise charging of equipment
  (many devices now have AI smart charging systems to avoid damaging the battery and dissipating excess power)

- Unplug devices when not in use and/or opt for power strips with the power switch turned off
  (turning off power strips or main switches at night or when equipment is not in use can reduce energy consumption and bills)

- Switch off computers and electronic devices at night and when not in use rather than in stand-by mode

- Heating and cooling of spaces according to people's real needs in order to prevent energy waste in unused spaces
  (general practice is to not warm an interior space to more than 21°C in winter and to not cool down an interior to more than 5°C below the outside temperature in summer)

- Choose a low consumption lighting system

- Turn off Wi-Fi when not in use

- Switch off car, lorry and motor home engines when not needed

ENERGY SOURCES

- Choice of electricity and green energy suppliers
  (not all European countries have access to sufficient green energy suppliers, but it is important to carefully select the supplier in order to have the highest possible percentage of green energy)

- Avoid fossil fuels wherever possible
  (fossil fuels not only have a major impact on the environment, but also on people's health due to the toxic waste gases they produce)

- Avoid the use of fossil-fuelled vehicles
  (there are many alternatives on the market, such as biogas, hybrid and electric vehicles)

- Avoid or reduce the use of power generators as much as possible
  (Avoiding diesel or other fuel generators can be a challenge, as there are few alternatives, but new technologies and alternative solutions can be found on the market. Keeping up-to-date on technologies and new types of generators is important for driving the green transition)

- Avoid heating or cooling mobile homes by keeping the vehicle engine running, preferably using an alternative cooling/heating system, such as refrigerators or battery-powered heaters

POWER GENERATORS

Generator sets, which typically use diesel as a fuel, are currently difficult to replace with more environmentally-friendly alternatives. While awaiting the development of new technologies, there are some elements that can be considered in order to reduce the carbon footprint of generators:

- Switch off the generator immediately when it is no longer needed

- Make a preference for low carbon emission generators, e.g. biodiesel, hydro, etc.

- Prevent noise pollution by opting for quiet generators

- Take note of the generator's Eurolabel
  (Euro1 is the most polluting while Euro6 is the least polluting)

- Make a preference for generators with fine particulate filters

- Keep up with technological developments

- Always check with your rental provider for the most sustainable options

GRIP

The GRIP department, lighting and the choice of equipment and the disposal thereof, is another important area of action when it comes to reducing the carbon footprint of a production. When choosing the equipment and lighting system, it is important to pay particular attention to the energy efficiency of these devices. It is also vital to adopt behaviours that avoid any energy waste, maximise the life cycle of a device and dispose of them properly when they are no longer usable.

KEY ELEMENTS TO CONSIDER

LIGHTING

- Do not light up empty and unused spaces

- Installation of an automatic lighting system

- Use dimmers to adjust the brightness of rooms based on actual needs and reduce energy consumption

- Make a preference for natural light and reflectors when shooting outdoors

- Use energy-saving light bulbs, such as LEDs, avoiding energy-consuming bulbs such as tungsten and incandescent bulbs whenever possible

- Systematically turn off lights when they are not needed and systematically remind people involved in production to also do so

- Recycle light-coloured gels that can be reused for new productions

- Buy long-life glass dichroic filters instead of colour gels

- Search for oil-free substrates and adhesives

EQUIPMENT

- Purchase equipment only when strictly necessary and make a preference for rental
(the choice to purchase equipment should be subject to a real need for frequent and long-term use of the purchased item. Where the use of the item cannot be sufficiently optimised and utilised, rental should be the preferred option)

- Take note of the energy efficiency rating of equipment
(the European energy efficiency rating system for appliances rates equipment on a scale from A to G, where A stands for very good energy efficiency and G for poor energy efficiency)

- Prefer equipment powered by rechargeable batteries rather than disposable ones

- Aim to maximise the life cycle of electronic devices
  (*repair equipment that can be repaired or donate it to organisations that can give it a second life if the item is no longer in use instead of throwing it away*)

- Take e-waste to specialised recycling centres

- Check with equipment manufacturers or retailers to see if they will take back old or broken purchased items for repair, recycling or dismantling

- Raise awareness among equipment operators on how to save energy

- Limit waste and excessive consumption of consumables (gaffer tape, grips, straps, ropes, etc.)

SET CONSTRUCTION and SPECIAL EFFECTS

Set construction is an important part of every film production. Very often the sets are single-use and are discarded after filming. To reduce waste and environmental impact, a number of techniques can be adopted. Starting with the design phase, the set design should be created while taking the dismantling process and the recovery of materials into account; consumables such as paint should be non-toxic and eco-certified, and wood should be local and sourced from sustainable production facilities. Furthermore, efforts should be made to reuse all materials, props and scenery as much as possible, rather than discarding them after filming. Along with an impact on the environment, special effects can also have an impact on human health, meaning they should be selected in a way that makes them compatible with the location in order to minimize potential contamination/pollution of the local environment and their impact on people's health.

KEY ELEMENTS TO CONSIDER

DESIGN

- Design sets that optimise the lifecycle of materials and decommissioning, allowing sets to be easily reusable and making materials easily recoverable
  (*consider a possible second life for the materials and/or an intelligent dismantling of the sets in order to reuse it in future productions and reduce waste*)

- Coordinate the design and plan the shooting schedule to allow for the reuse of set walls, platforms, lighting grids and sets

- Make a preference for renting items, furniture and large decorations over buying them

- Make a preference for reusable steel scaffolding instead of disposable wooden scaffolding

- Develop a specific recycling plan during the pre-production phase

- Select non-toxic building materials

- Plan for the reuse, sale or donation of unwanted set materials before opting for disposal *(take other local productions, theatres, set design workshops or charities that are willing to collect, recycle and reuse materials and sets into consideration).*

PAINT AND HAZARDOUS SUBSTANCES

- Make a preference for environmentally-friendly paints, sealants and lacquers with environmentally-friendly labels

- Take into account the environmental impact of paint, chemicals and other hazardous substances when disposing of them
(check manufacturer or studio instructions on the disposal of products or return to retailers for collection or disposal instructions)

- Avoid the use of spray paint
(spray paint is not only more harmful, as it is easily dispersed into the environment, but also poses a major health risk due to unintentional inhalation)

- Prevent paint, debris and any chemicals from entering drains, ducts or gutters

- Avoid the use of Styrofoam wherever possible, replacing it with bio-foam as an alternative.

- Make a preference for plant-based paint strippers

- Prepare a bucket to use for the disposal of leftover paint as hazardous waste

- Create a plan for the disposal of paint supplies, including brushes, rags and containers, as hazardous waste

- Avoid using plastic film to protect floors, using cardboard and recycled materials instead.

WOOD

- Make a preference for wood from local production facilities and sustainable forests or explore alternative woods such as sorghum, bamboo, palm, arbutus or engineered wood (mass timber).

- Look for EU forest certification (link)

- Make a preference for cultivated maple and birch timber over jungle hardwoods such as lauan or plywood products made from imported tropical hardwoods
(farmed maple and birch are generally more sustainable, as generally their life cycle is more controlled. Furthermore, plywood often contains formaldehyde-based adhesives that can release noxious fumes at room temperature)

- Collect and store sawdust for reuse, e.g. to absorb spilled paint.

- Turn wood waste into mulch for the garden

SPECIAL EFFECTS

- Use water-based smoke liquids to reduce contamination
  (traditional smoke and haze are manufactured with mineral oil and glycol-based products that are associated with acute and chronic adverse effects on respiratory health)

- Make a preference for using propane over liquid fuel for fire effects whenever possible
  (propane is liquid when stored and when released into the air it vaporises with no detrimental effect on the ozone layer and with a reduced risk of contaminating soil, water, marine ecosystems or vulnerable habitats)

- Avoid burning toxic materials such as plastic, rubber, diesel, etc.
  (these materials release toxic gases such as dioxins, furans, mercury and polychlorinated biphenyls, to name a few)

- Recycle scrap steel and aluminium

- Limit the amount of hazardous materials used and substitute them with environmentally-friendly alternatives

- Use biodegradable artificial snow products

ART DEPARTMENTS: Costumes, make-up, hairdressing.

Art departments, such as costume, make-up and hairdressing, are crucial aspects of audiovisual productions when wanting to give atmosphere to a story. Along with having a major impact on the environment, these activities can also have a significant impact on human health. In order to minimise their impact, choose toxic-free hair and make-up products, look for sustainable fabrics and clothing and avoid any contamination of the local environment with hazardous substances or waste products and other waste.

KEY ELEMENTS TO CONSIDER

COSTUMES

- Buy or rent second-hand clothes and accessories
  (there are different options on the market, such as costume rental services, second-hand markets and clothing and costume sharing subscriptions).

- Preferably use cloths made from organic cotton or other natural materials, avoiding petroleum-based fabrics such as vinyl and polyester

- Preferably use locally made garments and pay attention to the label indicating the origin of garments and accessories

- Look for sustainable clothing certification
  (these include: B Corp by B Lab, Fairtrade, Worldwide Responsible Accredited Production (WRAP), SA8000 Social Accountability International, Global Organic Textile Standard (GOTS), The Better Cotton Initiative (BCI), STANDARD 100 by OEKO-TEX, etc. Disclaimer: please note that small brands do not always have the financial resources to achieve certification, but this does not mean that their products are not sustainable. A certification is only a system to facilitate the choice of garments, but researching the manufacturer's commitment to sustainability and reading the garment label is also recommended)

- Repair garments and/or accessories before buying new ones

- Avoid clothes that require dry cleaning or opt for environmentally-friendly dry cleaning
  (traditional dry cleaning uses perchloroethylene (PERC), known to be highly toxic; alternatives with non-toxic solvents are available on the market)

- Support the cleaning process with energy-saving machines and environmentally-friendly detergents
  (take note of the energy class of washing machines and phosphate-free and fragrance-free detergent)

- Preferably use powder detergent over liquid detergent
  (liquid detergents are heavier and require more energy to be delivered)

- Store and recycle costumes and clothing for new productions or donate them to local charities

- Reuse clothes hangers and plastic clothes covers

MAKE-UP AND HAIRDRESSING

- Preferably use vegan/cruelty-free products
  (an increasing number of products do not perform test on animals and are 100% vegan)

- Preferably use product brands that use less packaging or that offer refill solutions to avoid packaging waste
  (reducing the amount of packaging will reduce the amount of non-recyclable plastics and metals and reduce the build-up of undifferentiated chemical waste)

- Preferably use product brands that are committed to avoiding toxic ingredients and other ingredients that may cause adverse health effects
  (inquiring about a brand's environmental and health commitments can have both safety and environmental benefits)

- Preferably use eco-friendly alternatives for make-up, hairdressing and beauty products
  (organic cosmetics do not contribute to the dispersion of herbicides and pesticides into the environment and pose less risk to health)

- Buy in bulk to reduce transport costs/impact

- Avoid aerosol products containing ozone-depleting substances
  (these substances include: chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, methyl bromide, carbon tetrachloride, hydrobromofluorocarbons, chlorobromo-methane, methyl chloroform)

- Limit the use of consumables such as wet wipes and preferably use recyclable cotton.

- Establish a policy of purchasing environmentally-friendly products

- Avoid products containing microplastics
  (microplastics from cosmetics pose a threat to the environment if disposed of into bodies of water)

- Consider using paraben-free fake blood and/or DIY alternatives.

LOCATIONS

The setting and location is the place where production activities take place. The choice of location can have a major impact on many aspects such as transport, travel, accommodation, energy consumption, recycling, equipment needs, disposal of waste and hazardous substances, access to suppliers, etc. The choice of location is therefore the foundation on which the sustainability management of the production is built. Furthermore, during on-set filming every effort must be made to protect the local landscape, the natural environment and the local ecosystem.

KEY ELEMENTS TO CONSIDER

SCOUTING

- Choice of location with a sustainability plan in mind
  (consider the impact of a production on the landscape and ecosystem, including distance from facilities, production offices and cast and crew accommodation, access to green suppliers, availability of a recycling scheme and energy consumption)

- Find a location accessible by public transport or environmentally-friendly transport means such as cycling

- Provide information to cast and crew on green transport options

- Consult local film commissions for photos and information before planning any visits

- Create an environmental sustainability plan that is specific to the chosen site

PROTECTING THE ENVIRONMENT

- Check with local organisations to confirm whether sensitive and/or protected flora and fauna are present in the area
  (always make sure to protect and isolate sensitive areas).

- Ensure, together with the site manager, that production activities do not damage the local landscape and ecosystem

- Leave the site in the same state it was in before production and repair any damage caused

- Set up rubbish and recycling stations in accordance with local waste separation guidelines

- Do not staple, tack or tape anything to trees, preferably using elastic bands or string

- Protect indoor locations using recycled corrugated cardboard or eco-friendly reusable mats

FOOD AND CATERING

The choice of food and catering plays an important role in estimating the total environmental impact of a production and its overall carbon footprint. Elements such as the environmental impacts and commitment of the caterer(s), the choice of seasonal, local and meat-free food, avoiding disposable cutlery and considering energy efficiency are therefore key aspects to assess when drawing up the production plan.

KEY ELEMENTS TO CONSIDER

- Choose a catering service that applies the principles of environmental sustainability

- Use reusable cutlery and crockery instead of disposable equivalents and, where this is not possible, use biodegradable cutlery and crockery made from sustainable materials

- Choose local and seasonal organic food provided by local suppliers
  (organic food is an option that helps reduce the spread of chemicals, pesticides and other pollutants into the environment and locally produced food helps reduce CO_2 emissions resulting from transport)

- Minimising meat options and preferring vegetarian or vegan options
  (meat production produces more CO_2 than plant-based foodstuffs)

- Take fairtrade principles into account when buying imported food products (e.g. coffee and tea)

- Provide facilities for sorting and recycling waste

- Provide water dispensers and encouraging the use of reusable bottles, cups and mugs

- Order the correct amount of food to avoid food waste

- Donate unused food to local charities

- Use a reusable coffee filter instead of throwing filters away

- Get the caterer to use low-emission fuel or renewable energy to prepare and (re)heat food

HYGIENE AND WASTE

The final aspect to consider is cleaning and waste management during the production process. The choice of a sustainable cleaning supplier, the choice of non-toxic products and detergents and a proper system to manage all types of waste produced by all departments of a production are essential elements for consideration when drawing up a production plan.

KEY ELEMENTS TO CONSIDER

WASTE MANAGEMENT

- Provide adequate facilities for sorting waste

- Choose suppliers who will collect/remove waste

- Make the cast and crew aware of recycling practices

- Monitor the quantity of waste streams and implement strategies to reduce them

- Coordinate waste management with each head of department to identify the type of waste materials to be recycled

- Collect disposable and used batteries for proper disposal

- Investigate the disposal procedures for old electronic equipment

- Find a local public facility that can recycle difficult to recycle materials such as batteries, electronic equipment, construction waste and debris, scrap metal, wood, hazardous substances, etc.

- Co-ordinate a plan with heads of department to give waste a second life before finally disposing of it

- Provide adequate signage for all waste streams

- Avoid single-use plastic as much as possible

CLEANING

- Choose non-toxic and biodegradable cleaning products and detergents

- Look for products that are certified as environmentally-friendly

- Buy concentrated and bulk products to reduce packaging waste and transport costs

- Avoid using paper towels, with a preference for natural sponges and/or recyclable cloths

COVID-19

- Coordinate with the Covid-19 measures coordinate to establish a sustainable plan in accordance with health and safety guidelines

- Make a preference for disinfection products with the European Ecolabel

- Buy locally made products with reusable packaging

- Buy in bulk to reduce packaging and transportation

- Limit the use of disposable materials, with a preference for reusable and/or recyclable products whenever possible

- Make a preference for the use of certified, washable face masks whenever possible

- Look for companies or organisations that can recycle single-use face masks

💬 COMMUNICATION

Adequate communication is a crucial element to achieve the planned sustainability goals. Without constantly informing the team about the sustainability work practices, the goals, the tools available, and the code of conduct, the effort made to create a sustainability plan might not produce the expected results. It is therefore of vital importance to establish an adequate communication system to ensure everyone involved in the production is aware and agree on the sustainability goals and tools to achieve them.

KEY ELEMENTS TO CONSIDER

- Actively communicate sustainability services, practices and code of conduct
- use software to facilitate the workflow and avoid printing
- Communicate sustainable measures during pre-production to the team
- Communicate successful measures during shooting (on the call sheet for example)
- Be available to talk about any difficulties the team might find in their line of work with green measures.
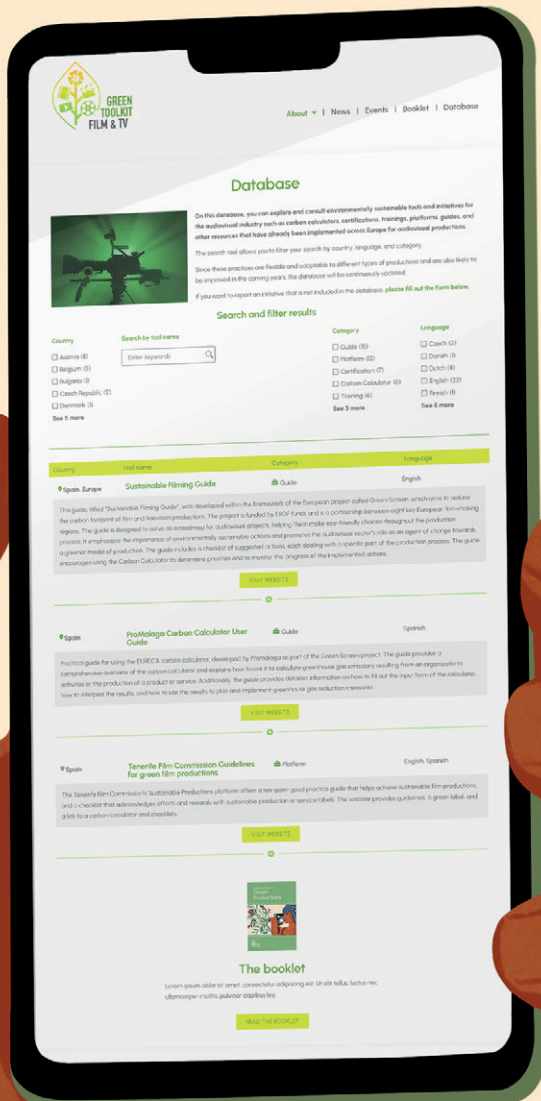
www.greentoolkit-filmtv.eu

4. Available tools

A mapping exercise to discover sustainability tools and practices that have already been consolidated into the European audiovisual ecosystem was carried out between 2021 and 2022 and its results are publicly available on the **greentoolkit-filmtv.eu** website. This website provides a database with the resources identified organised into 5 main different categories to support productions with their green transition. The records in the database can be filtered according to country, language and tool category.

The following tools have been identified in the European audiovisual ecosystem:

Platforms

This category refers to websites, most often publicly funded or owned by public institutions, with a set of tools and services to facilitate audiovisual productions with the adoption of sustainable working practices. These tools include guidelines, checklists, carbon calculators, trainings, articles, checklists and sometimes links to green suppliers.

Guidelines

They are usually downloadable publications with guidelines on how to establish sustainable working practices in audiovisual production. The guidelines differ from publisher to publisher and are organised either by explaining the basic principles of sustainability on a film set or by explaining in detail each action that needs to be taken in each film department in order to reduce a production's carbon footprint.

Carbon calculators

Carbon calculators are tools designed to calculate the overall carbon emissions of any audiovisual production. They can be online tools, offline software or, more simply, Excel spreadsheets with automatic calculations. These require the entering of information such as the number of trips made, staff, activities, catering, special effects, etc., and the tool will then provide an estimate of the production's carbon emissions. There are different types of carbon calculators on the market: some are free to use, some require a fee, some are designed for any type of production, and some are designed specifically for a particular type of production. It is also important to note that different carbon calculators currently estimate carbon emissions in different ways, meaning there is a possibility that carbon emissions calculated using two different carbon calculators for the same production may produce two different estimates. The European Commission is currently collaborating with different stakeholders on the creation a common carbon emissions estimation system that unifies the calculation systems used by different market players.

Certifications

In the European market there are different types of certifications. Certifications are issued by public bodies, but not exclusively; they are often issued by local or national film institutions or film funds to demonstrate environmental commitment. In some countries and regions, a certification demonstrating commitment to sustainability is mandatory in order to be able to film in a certain location. In other regions such a certification is not mandatory, but local institutions require a voluntary commitment to environmental sustainability based on specific (regional) guidelines or local laws. In addition to different types of local, national or regional certifications, some European production companies use international ISO certification to demonstrate their commitment to the environment. The most commonly used ISO certifications include:

• ISO 5001 – Energy management

• ISO 14001:2015 – Environmental management system

• ISO 9001/2015 – Quality management

Training

Different organisations offer a range of sustainability training for audiovisual productions. The types of training available can vary greatly and can be free of charge or accessible for a fee. Training can be on sustainability in general, the use of specific carbon calculators, how to become a green consultant or green manager on set, or in the form of seminars that give practical advice on how to manage sustainability on set.

4.1. Other resources

Consultancy and green production services

Different consulting services for Green productions are popping up on the European market. These are mostly private services and include:

- **Green Consultants**
  People trained to advise and manage all aspects of sustainability during an audiovisual production (either in-house or as external advisors). This is a new job role in film productions that is gaining momentum.

- **Consultancy firms**
  Structured companies offering different sets of services to film productions wishing to start their green transition. Services can include providing green consultants on set, calculating carbon emissions, monitoring the sustainability of production activities, managing green suppliers and much more.

- **Green production companies**
  They are the new generation of production companied that have the principle of adopting of environmentally-sustainable working practices at their core.

- **Associations**
  Non-profit association that assists productions that wants to adopt sustainable working practices at a local, regional, national or international level. Services differ from one association to another.

Carbon offsetting

Being aware that all human activity has an environmental impact and working towards reducing carbon emissions as much as possible, it is important to bear in mind that not all emissions are avoidable. There are different systems for offsetting carbon emissions, the two main types being:

- Planting trees through a dedicated organisation to absorb the carbon emissions produced over time.

- Investing in projects to develop infrastructure and technologies that can reduce carbon emissions in less developed areas of the world.

It is important to note that carbon offsetting should be used with caution and should not be seen as an alternative to reducing carbon emissions from production. Everyone should commit to reducing their carbon footprint before considering carbon offsetting.
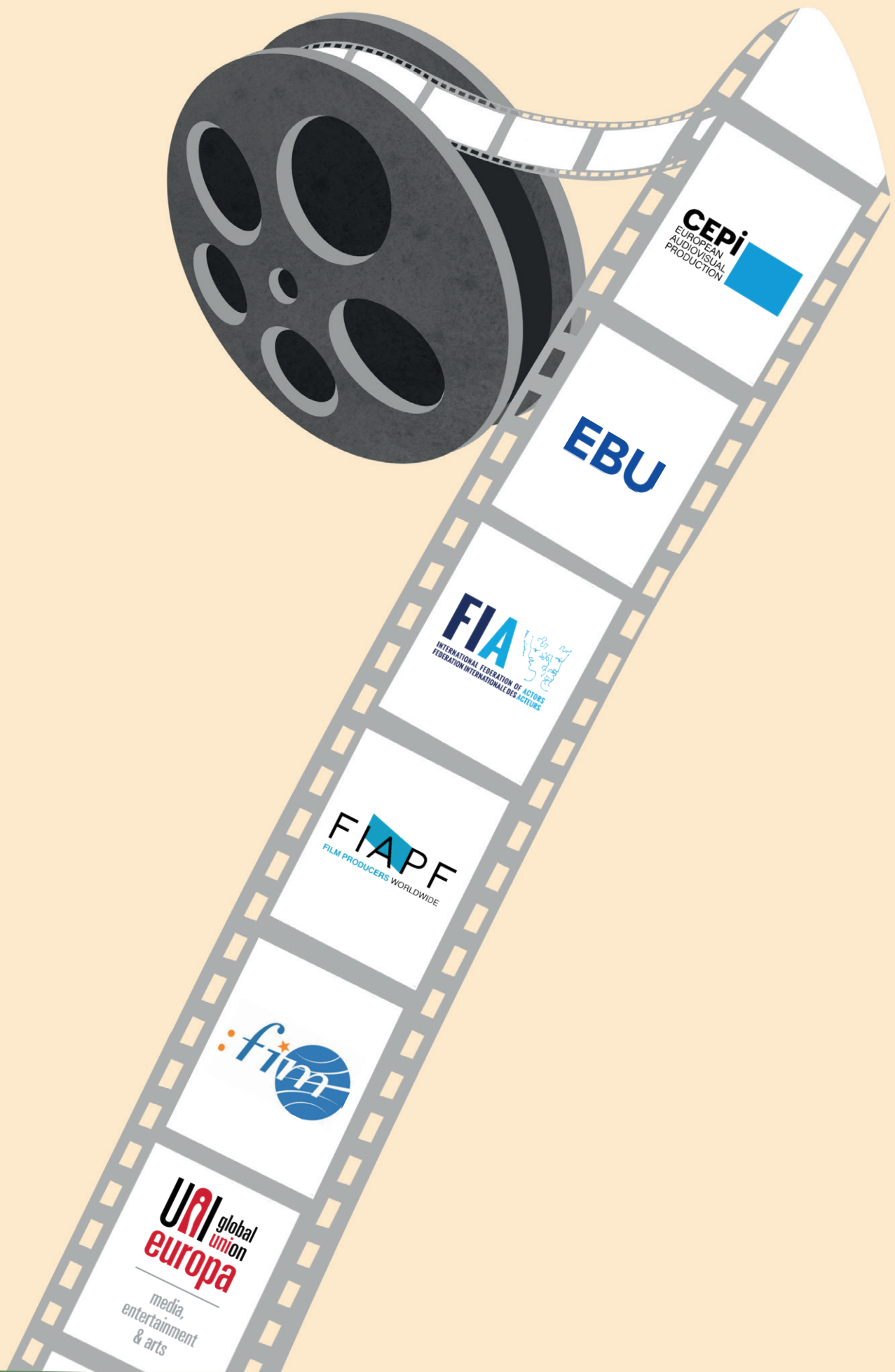
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Social Partners

- **CEPI**, European Audiovisual Production Association

- **EBU**, European Broadcasting Union

- **FIA** International Federation of Actors

- **FIAPF** International Federation of Film Producers' Associations

- **FIM** International Federation of Musicians

- **UNI Europa/EURO-MEI**, media, entertainment and arts sector

Extra input has been provided by project partners members.

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This booklet is a collective work by Social Partners, curated by Davide Gianluca Vaccaro with specialist input from the Steering Committee and the Experts Group.

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