

CINEREGIO

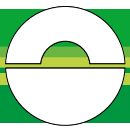
GREEN REPORT 2020

ON SUSTAINABILITY IN
THE EUROPEAN REGIONS

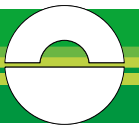


cine  regio

European network of regional film funds



INTRODUCTION	3
MANIFESTO FOR SUSTAINABLE FILMING	4
POLICY AND STRATEGIES	5
TRAINING	10
TOOLS: BEST PRACTICE, CARBON CALCULATORS, AND CERTIFICATION SCHEMES	13
REGULATIONS AND INCENTIVES	17
INNOVATION	19
GREEN PRODUCTIONS: CASE STUDIES	21
PARTNERSHIPS	28
STUDIOS AND BROADCASTERS	31
SUSTAINABILITY BEYOND PRODUCTION	32
FUTURE ACTIONS	35
CONCLUSION	37
CINEREGIO GREEN MEMBERS	38



FROM 'TAKE-MAKE-WASTE' TO ACCELERATING CIRCULAR ECONOMY

We are delighted to present the Fourth Edition of the CineRegio Green Report. It provides an overview of environmentally friendly efforts and practices taken by 15 regional film funds members of CineRegio – the network of 50 film funds from across Europe.

The report highlights opportunities, challenges, and tools that have been already implemented as we embrace this important learning curve towards a circular economy. Green practices can be integrated in the workflow of any film production – from short films and low-budget productions all the way up to Hollywood blockbusters. Models and methods may vary from region to region: green guidelines, green set protocols, certification systems, incentives and rewards, carbon calculators, to training programs and on-set recycling strategies as well as databases on locally produced food and 'second hand' set construction materials.

Developing, building and executing green strategies has been our approach over the past five years, instead of just talking about it. Doing involves risk but it's the only way to make real progress.

The 'Build-Measure-Learn' method has effectively doubled our knowledge. This is also why we have committed our time to produce this report – to be able to share and enrich – bringing the public and private sector together – bringing local, regional, national and European levels together – to achieve green progress.



The next step of our journey is to promote a pan-European rating system for sustainable film production. This tool – which has the working title GREEN FILM – has already been adapted by a number of CineRegio members in their respective territories. And the journey will continue during 2020 as 10 film funds have committed themselves to further developing the system. We're so much looking forward to sharing the results with you!

This Report was made possible thanks to financial support from Canary Islands Film, Film- & Cinema Culture Lower Austria, Film i Skåne, Filmförderung Hamburg Schleswig-Holstein, Film London, Flanders Audiovisual Fund, IDM Südtirol, Mallorca Film, MFG Baden-Württemberg, Sardegna Film Foundation, Screen.brussels, and the Trentino Film Fund & Commission. Last but not least, special thanks and gratitude to Editor Birgit Heidsiek for producing this report and actualizing its full potential, which is available as a free download on our website www.cine-regio.org/green

Yes, film production can move from 'take-make-waste' to accelerating circular economy. And although this journey may challenge film professionals and film funds – the challenge is nothing compared to the Climate Change Challenge. So let's continue to 'Act Local – Act Now' and to inspire, exchange and share!

Charlotte Appelgren
General-Secretary, CineRegio



MANIFESTO FOR SUSTAINABLE FILMING

The CineRegio Green members, the sub-group for Green Filming of CineRegio, hereby present their joint statement, the CineRegio *Green Manifesto*:

With this statement, the supporting institutions wish to contribute to the awareness of Green Filming and of enhancing sustainable and climate friendly measures in film and television production and its funding.

Many professionals working in film and TV are concerned with environment and climate friendly production. There is, on occasion, uncertainty as to whether higher costs connected with sustainable production may be included in production budgets and whether they may be eligible for public sector funding.

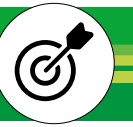
As a matter of fact, Green Filming does not necessarily result in higher costs. Furthermore, innovation and advanced technology allow productions to work in an increasingly resource friendly and cost effective way.

However, if additional costs do arise through environmentally friendly filming, these costs should be eligible as part of the production budget. The CineRegio Green members recognize approaches to sustainable production and their associated costs and confirm their eligibility for public funding.

It is our declared goal to visibly promote sustainable policies and means and make them achievable for the film and television industry and its funding agencies.

The signatories of manifesto:

- Auvergne-Rhône-Alpes Cinéma, France
- Canary Islands Film, Spain
- Cinéforum, Switzerland
- Ffilm Cymru Wales, UK
- FilmCamp, Norway
- Filmförderung Hamburg Schleswig-Holstein, Germany
- Filmfonds Wien, Austria
- Film i Skåne, Sweden
- Film i Väst, Sweden
- Filminvest, Norway
- Film London, UK
- Flanders Audiovisual Fund, Belgium
- Fondazione Film Commission Roma Lazio
- IDM Südtirol – Alto Adige, Italy
- Łódź Film Fund, EC1 Łódź, Poland
- Mallorca Film Commission & Fund, Spain
- Medietfondet Zefyr, Norway
- MFG Baden-Württemberg, Germany
- Nordnorsk Filmsenter, Norway
- Paris Region film fund / Film Paris Region, France
- Sardegna Film Foundation, Italy
- Screen.brussels Fund, Belgium
- Screen Flanders, Belgium
- Tartu Film Fund, Estonia
- Trentino Film Fund & Commission, Italy
- Wallimage, Belgium
- WRAP Fund, Ireland
- Zürcher Filmstiftung, Switzerland



POLICY AND STRATEGIES

CINEREGIO

The CineRegio Green members journey: from launching the *Manifesto for Sustainable Filming* to a pan-European certification scheme for productions.

CineRegio has been involved in environmental sustainability ever since its first Report on the subject, which was published in 2014. This Report is now in its fourth edition, and it provides clear evidence of the progress that has been made by respective funds and regions throughout Europe. In 2019, CineRegio enjoyed expansion into new territories. Among them is the Łódź Film Fund, EC1, which is inaugurating green filmmaking activities and education in Poland.

The members' commitment to sustainability reached critical mass in 2019 when they discussed the publication of a *Manifesto for Sustainable Filming*, which expresses a clear commitment from funding organizations to recognize production costs associated with environmental sustainability (e.g., environmental sustainability consultants / green stewards) and to recognize the promotion of environmental sustainability through their efforts.

In December 2019, twenty-eight members signed the *Manifesto for Sustainable Filming* – this reflects 56% of CineRegio's membership, which represents a significant and timely commitment. CineRegio has set the ambitious goal of gaining 100% of its membership as signatories to the Manifesto by year-end 2020.

Strategies and tools vary across the membership but individual members have been cooperating on a green agenda for some time now, and CineRegio discerns many common active principles at work across the various available tools, strategies, and policies.

Many CineRegio Green members have official green protocols, charters, and/or certification schemes. In some regions these are mandatory; in others, they are either linked to financial incentives or they are simply strongly encouraged. Various regions have developed extensive guidelines, lists of sustainable suppliers, and carbon calculators. Others are working with individually-tailored environmental consultants to deliver training and best practices for their respective regional industries. Members have been working with their respective industry sectors as well as with municipalities and regional governments in order to identify challenges and potential solutions. It is clear that these regional efforts have now also generated interest through member agencies as well as at national levels, and they are progressing toward a united policy front.

The CineRegio Green membership also includes two Interreg-Europe funded projects that advocate an environmental sustaina-



CineRegio Green members meeting with Green Screen members

bility agenda that relies on identifying best practices as well as comprehensive policy.

As European producers become more environmentally aware and engage in challenges to sustainability while co-producing across Europe, a clear task is emerging for the creation of common practices as well as standardized inter-regional methodologies. The members of the CineRegio Green group have not neglected to discuss this. CineRegio is acutely aware that it is already working toward the same key principles across various green protocols, certification schemes, and guides. CineRegio Green members are asking productions to take action in the areas of transportation, energy, catering, set construction, and waste management in order to mitigate carbon foot prints, reduce waste, avoid harmful materials, and encourage best practices.

CineRegio Green members have agreed on the necessity of standardizing best practices uniformly across its membership, and of establishing a cross-regional certification scheme that its members, other regions, and nations can adopt.

By considering the importance of a clear and reliable verification procedure for establishing valid green certification, CineRegio Green members identified the Green Film rating system, originally developed by Trentino Film Fund & Commission, as the most concrete and exportable approach of all currently existing schemes, and they established it as a common tool to be used by the CineRegio membership.

CineRegio Green members will now reach out to regional, national, and European stakeholders and funding agencies to join it and support CineRegio's journey.

This will ensure that producers will be able to work across regions sustainably and that funds throughout Europe will be able to link their funding and/or investment criteria to a pan-European certification scheme.



CANARY ISLANDS FILM

The Canary Islands, led by the Tenerife Film Commission, has been working on green productions since 2018, which includes step-by-step training, tools such as the 10-point Good Practice Guide, and a pilot program for Green Certification. The goal is to share working experiences in order to coordinate a simple and common certification for Spain which is in line with European standards.

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

Thanks to the Green Shooting Card's great success, an eco-label certifying environmentally friendly film productions will be awarded in conjunction with the Green Shooting working group and BKM on a national level starting in 2020. Producers from all across Germany are applying for the green label, which certifies their sustainable actions and affords them visibility.

As the premiere film fund in Germany, the Filmförderung Hamburg Schleswig-Holstein (FFHSH), starting in April 2020, is going to require that applicants from majority-German film productions shot in Germany commit themselves to complying with criteria established by the new and enhanced Green Filming Badge.

The FFHSH defines its approach with its Green Policy, which is available on-line. The green action plan for administrative staff includes additional measures: waste management; extra bins for organic waste; the use of certified recycled paper; a shared company bicycle for short-distance trips; and reusable bowls for take-out food at lunch time.

FILM I SKÅNE

In autumn 2017, Film i Skåne initiated a study on the environmental impact of film production in collaboration with students from the International Institute for Industrial Environmental Economics. The study offered many suggestions for greening the film industry in Southern Sweden, and Film i Skåne has since managed to secure funding from Business Region Skåne to pursue some of these environmental initiatives.

Film i Skåne's long-term goal is to make green production practices in the region a routine. To achieve this, a twofold approach has been proposed: 1) requiring environmental criteria when selecting film productions for co-financing; and 2) providing financial incentives at the end of a project if the production company manages to fulfill certain environmental objectives during the production.



The Swedish mini-series *Syster 1968*, a historical drama

Film i Skåne contracted sustainability consultants who conducted a case study to evaluate the current situation and to draft a set of criteria. It will take time and resources to realize Film i Skåne's goals. Even though a number of practices in Sweden may already be considered to be sustainable, it is necessary to define the criteria and develop standards that may be used to evaluate film productions objectively.

FILM I VÄST

Film i Väst's goal is to determine which environmental standards may reasonably be imposed at this time, which environmentally friendly methods achieve the most effective results, and which ones can be carried out simply, as well as to provide an analysis of difficulties in implementation. Production companies applying for funding are obliged to submit an environmental plan.





FLANDERS AUDIOVISUAL FUND

As one of the frontrunners in sustainable production, the Flanders Audiovisual Fund (VAF) has made sustainable actions a formal requirement for eligibility for its support. Customized coaching for individual productions has had a measurable effect: The average CO₂ impact was reduced from 83 to 73 tons. Clever choices in transportation, energy, catering, and waste in pre- and post-production also resulted in reductions of usage as well as accompanying financial benefits.

In 2018 VAF broadened its sustainability approach. Initially, the focus was on reducing the environmental impact of film and media productions by individually coaching filmmakers. Recently, however, the VAF began relying on the Sustainable Development Goals (SDGs) set forth by the United Nations as a moral compass. Not all sustainable choices have a measurable impact on CO₂ emissions, but thanks to the SDGs they have become tangible.

The SDGs cover a wide range of subjects which include education, equality, diversity, equity, gender, consumption, climate, health, and biodiversity. The goal is to translate these SDGs into specific and inspiring actions throughout the entire audio-visual chain, from film school, script writing, and production to exhibition by working with writers, producers, cinema operators, and festivals.

IDM FILM FUND & COMMISSION

Starting in 2020, the IDM Film Fund & Commission will begin implementing the "Green Film Rating System for Sustainable Film Production." This System, originally developed by the Trentino Film Fund & Commission, will now be presented by Green Regio, CineRegio Green Members, to the MEDIA Sub-program for Creative Europe as part of a common approach, as well as recommendations for sustainable film production in Europe.

From 2020 onwards, in order to be eligible for the IDM Film Fund, production companies will be required to declare the measures they intend to take during location shooting in the areas of energy savings, transport and accommodations, catering, material selection, waste management, and communication.

These declarations will influence the funding decisions of the IDM Film Fund and they will be verified by an independent environmental agency during the realization of the audio-visual project. The production will then be awarded a Green Film Certificate and it will receive the last instalment from the IDM Film Fund after the final auditing process, only under the condition that the initially declared measures have been met.

MALLORCA FILM COMMISSION & FUND

Since its creation in September 2016, the MFC, together with the Illes Balears Film Commission, has been introducing producers to sustainability measures in film production as well as in other related audio-visual industry sectors, such as movie theaters and film festivals. This is part of a wider program undertaken by the Mallorca Island's Council and the regional Balearic Government to harmonize the interaction of economy, culture, and natural surroundings. This program will be embodied in a green card for producers and filmmakers, which will grant them certain advantages and benefits for observing green guidelines on their shoots. (See the "Future Actions" section.)



PARIS REGION

The Ile-de-France Region, thanks to efforts made by its film commission, invested in the creation and development of the Ecoproduct project in 2009, which promotes green best practices on film shoots. Since then, the Ile-de-France has continued its efforts to promote green film shooting by publishing and distributing free tools and guidelines, and by making film crews and producers aware of the importance of green film production.

In 2017, the film commission joined the Green Screen partnership, which embarked on a three-year-long European project to green the creative industries by improving policy for green practices in the audio-visual industry. The same year, an eco-bonus for green production was also initiated within the framework of the Paris Region Film Fund. More than ten film productions have benefitted from the eco bonus, which averaged € 50,000.

The strategy in the coming years is to keep greening the film industry by going more deeply into the production process and by involving the entire audio-visual ecosystem.

SARDEGNA FILM COMMISSION FOUNDATION

The Sardegna Film Commission Foundation (SFC) is broadening the scope of its training mission with a new program that was developed in collaboration with the island's Environmental Agency. Analogous to the successful training initiative HEROES 20.20.20, which combined sustainable film production with green storytelling, this new short-film program focuses on the 17 Sustainable Development Goals (SDGs) set forth by the United Nations.



Photo: Courtesy of Paramount Pictures, Philippe Antonello/Hulu

Kyle Chandler in George Clooney's series, *Catch 22*

Launched in fall 2019 with financial support from the Environment Minister, this program resulted in the island being chosen to serve as a model for state policy because it is one of the regions that is most vulnerable to climate change. In order to address these issues in other regions, Sardinia is developing a short list of best practices that will be implemented on a national scale.

SCREEN.BRUSSELS

screen.brussels is committed to sustainable development as well as to the circular economy. screen.brussels has already implemented practical measures and it encourages productions to undertake sustainable measures which include raising awareness among producers and film crews. screen.brussels also distributes environmentally friendly flasks to crews to reduce the use of disposable plastic water bottles.

GREEN FILM

TRENTINO FILM FUND & COMMISSION

During 2019, the Trentino Film Fund & Commission revised its rating system. The specific purpose was to transform T-Green Film into a comprehensive and open tool that could be exported and adapted to other regional or national contexts. The more this rating system is shared by and between different territories and countries, the more effective it becomes, particularly in the case of international co-productions. At the same time, the goal is to develop a pan-European network of institutions that use the same tool, share best practices, and organize training programs for sustainable film production. T-Green Film has thus evolved into *Green Film*. During the revision process, some requirements that tied the implementation of some actions to a specific

Filming the international co-production *Sanctuary* at the Imperial Hotel Levico Terme, Trentino



Photo: Yellow Bird



POLICY AND STRATEGIES

territorial context were eliminated and the scoring mechanism was adjusted to facilitate its adoption by other film funds, film commissions, and film producers across Europe. *Green Film* may now be considered an off-the-shelf tool, ready to be adopted by other institutions. The adopting institutions will be entitled to issue the *Green Film* Certification to projects that achieve successful ratings, and, if they so wish, may reward producers with supplemental incentives (e.g., services, cash incentives, etc.).

Moreover, an umbrella logo with regional variants (which display the name of the region below the *Green Film* logo) were designed to visually identify institutions that adopted the rating system as well as projects that have received *Green Film* certification. (See www.green.film)

WALLIMAGE

To mark its twentieth anniversary, Wallimage, the first regional fund established in Belgium, is taking concrete action to protect the environment. As a member of the CineRegio Green group, Wallimage ratified the *Manifesto for Sustainable Filming* to confirm its official commitment to environmental issues. Thanks to Wallimage's Belgian counterparts, Screen Flanders and Screen Brussels, as well as to the growing environmental awareness in



the industry, the green momentum is accelerating. Production teams are now implementing new environmental rules on set. To keep the momentum going, Wallimage is determined to integrate environmental sustainability into its project selection criteria. To achieve this, Wallimage has adopted the *Green Film* rating system and has taken the opportunity to become part of a larger green network that operates under uniform standards. This will also benefit producers because it opens up new opportunities at several regional funds while at the same time it avoids the needless complication of producing multiple sustainability reports.

GREEN SCREEN

AN INTERREG EUROPE FUNDED PARTNERSHIP

Green Screen is an Interreg Europe funded partnership project that works across eight EU regions to improve policies and achieve quantifiable success in reducing the carbon footprint of film and TV productions.

These industries are successful growth drivers throughout Europe, and they are an important contributor to the creative industries in the European economy. From 2010 to 2014, 7,769 feature films were produced in the EU. Five of the world's top ten markets for film production are based in Europe (the UK, France, Germany, Spain, and Italy).

Green Screen's goal is to align the practices of these successful industries, standardize environmental practices, and improve regional policies so that sustainable measures for producing films, TV, and audio-visual content can be adopted all across Europe. Under the auspices of Green Screen, participating regions can improve policies to motivate and equip the current and future workforce to adopt sustainable practices and thus

reduce CO₂ emissions. The project runs from 2017 to 2021 and its partners include:

- Film London (UK) – Lead Partner
- Bucharest Ilfov Regional Development Agency (Romania)
- Flanders Audiovisual Fund (Belgium)
- Paris Region Enterprises (France)
- Municipality of Ystad / Film i Skåne (Sweden)
- Municipal Company of Initiatives of Malaga S.A. – Promalaga (Spain)
- Rzeszow Regional Development Agency (Poland)
- Slovak Audiovisual Fund / Slovak Film Commission (Slovakia)

The Green Screen Project's goal is to reduce the carbon footprint of the audio-visual industry in Europe. The project is funded by the EU's Interreg Europe program (budgeted at €2m) through the European Regional Development Fund. (See www.interregeurope.eu/greenscreen)



TRAINING

CANARY ISLANDS FILM

In 2018, the Tenerife Film Commission offered its first one-day workshop on green production. This workshop, organized in collaboration with the Canary Islands International Environmental Film Festival FICMEC held in Garachico/Tenerife, attracted about twenty producers and institutions.

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

In 2019, the Filmförderung Hamburg Schleswig-Holstein continued to provide the film industry with information and training on green film production. At a four-day green production workshop, participants brought a script to analyze its various requirements for different departments as well as to serve as a model for hands-on approaches. The seminar is structured to permit participants make step-by-step preparations for a Green Consultant certification, which will officially be granted by an assessment committee. The aim is to establish the Green Consultant as an official job description in green productions.

FILM I VÄST

Film i Väst has been offering a free course in sustainable film production several times a year since 2017. It is designed primarily for producers and crew members. Its objective is to increase awareness of environmental questions and to teach robust sustainable production methods. The course has been taught in the Västra Götaland Region by an environmental strategist and a sustainability consultant who serve as lecturers. Film i Väst has also used lectures to reach out to the Norwegian Film Institute, Stockholm University of the Arts, Sveriges Television (SVT), and the film summit at Gothenburg Film Festival, among others. In 2020, a collaboration is being initiated with the Swedish Film & TV Producers Association. Courses designed for film and TV producers will be held in Stockholm.

FILM LONDON

Film London is working with Greenshoot, which has been training 240 new entrants to the film & TV industry in sustainable production practices. Any production that seeks Green Screen environmental certification is committed to employ a trained Green Screen runner to oversee the implementation of the program.

Of 240 trainees over the last five years, 62 % were female and 38 % male; 44 % were Black Asian Minority Ethnic (BAME). As a



Photo: Tenerife Film Commission
Green workshop in the Canary Islands

result of this training, Green Screen runners have worked on many commercials, films, and prestigious productions such as *The Crown*, *Behind Her Eyes*, and *Everybody Is Talking about Jamie*.

In 2019 Greenshoot joined Film London's Equal Access Network (EAN), which helps new entrants, mid-career professionals, and people returning to the film and TV industry. Supported by the Mayor of London, this inclusion initiative is offering monthly masterclasses with leading industry speakers as well as individualized CV and career counselling. EAN helps companies and productions recruit new entrants as well as junior and mid-level professionals, and it offers internships, returnships, and other paid employment opportunities.

FLANDERS AUDIOVISUAL FUND

According to the VAF, the average film production in Flanders emits 73 tons of CO₂, which equals as the annual emissions output of ten Belgian households. Projects that receive production support are individually coached. During an orientation meeting with VAF's sustainability coach, the project is assessed and the different areas of carbon-emissions impact are discussed. The approach is to inspire producers and their teams with hands-on practical examples.

The VAF does not simply focus on sustainability at the production level; it has enlarged its scope to include the entire chain of audio-visual production from conception to exhibition. Within the framework of the Green Screen project, the VAF developed a standardized presentation which is directed principally to students and teachers at film schools. This presentation, aside from pointing out environmental and sustainability-related challenges, also focuses on the different roles a professional in the audio-visual sector can play and their impact not only on the set but also for the future of the planet.



At the VAF Storycon conference, viewing a film was compared to being in a flight simulator. Pilots are trained in flight simulators, which recreate realistic situations. Film can also serve as a flight simulator for society, by realistically recreating our fears and challenges in order to train us to make significant changes to create a better and more sustainable world. Storytellers can address sustainable topics and/or include subliminal sustainable messages. As for production, the script determines the logistical organization of a film set.

Filming abroad has a large impact, which is expressed both in CO₂ emissions and in the production budget. The VAF wants to protect creative freedom but it also wants to increase awareness among writers.

As an example, the VAF presented a video game called *Flotsam* in which the players collect waste at sea. This game tells a subtle story about sustainable materials management, the value of waste, and the repurposing of discarded items into something new. The video game format makes it possible to reach out to target groups that are difficult to reach with traditional brochures or websites. (See <http://www.pajamallama.be/flotsam/>)

IDM FILM FUND & COMMISSION

The IDM Film Fund & Commission is planning several programs for training local film professionals and for assisting service providers in creating and offering sustainable products and services for the audio-visual industry. Furthermore, the IDM Film Fund will be training local Green Managers who will support production companies and film professionals in order to optimize sustainability in the production process.



Photo: Magali David / Audiens

Training workshop at Île-de-France

LOWER AUSTRIAN FILM & CINEMA CULTURE / LAFC

Since 2018, the Lower Austrian Film & Cinema Culture / LAFC has been offering lectures as well as consulting services for green film production. In January 2019, the LAFC organized the first green film production workshop in Austria. The Evergreen Prisma Workshop gave Austrian filmmakers practical advice on managing film productions sustainably to reduce carbon emissions and to cut costs by using a carbon calculator to plan, manage, and control productions. In October 2019, the LAFC offered a free four-day seminar to train filmmakers to become Green Consultants. The seminar covered the basics of green production: planning, carbon calculation, communication, sustainable procurement, energy management, lighting, production office, catering, transportation, and set design and construction as well as green storytelling.

Taking place throughout the year, the training initiative undertaken by the LAFC include keynote addresses, round tables, lectures, seminars, workshops, and consultations that enable filmmakers to learn more about the applicability of green production techniques as well as to exchange experiences.

MALLORCA FILM COMMISSION & FUND

The Mallorca Film Commission & Fund (MFC), together with the regional producers' association, has been organizing workshops on green film production ever since it began operations. The first event the MFC hosted in collaboration with the Hamburg Film Commission and *Green Film Shooting Magazine* in Palma in March 2017 brought together local producers and representatives of the regional Ministry of the Environment. It resulted in a series of similar workshops that focused on specific green production issues. In June 2018, the New York-based eco consultant Earth Angel gave a workshop for local producers on approaches to the sustainable management of energy, waste, plastic, and building materials on the film set. In April 2019, the MFC organized a workshop on catering with the association of local food producers of the Balearic Islands, which attracted producers as well as catering companies. The MFC will host another *Green Film Shooting* event, which will be open to both local and international producers as well as to other audiovisual professionals, to exchange experiences and best practices.

MFG BADEN-WÜRTTEMBERG

MFG Baden-Württemberg offers filmmakers training courses on green film production so they may obtain official certification as green consultants. The MFG supports filmmakers who imple-



Photo: Courtesy of Film London

Film London working with Mayor of London on social and environmental sustainability

ment environmentally-friendly and sustainable production methods. In order to make the Green Consultant training workshop as practical as possible, filmmakers may use their individual projects as the basis for discussions relating to the following subjects:

- The planning and conception of an environmentally friendly film project;
- The identification of production „hotspots“ in the areas of lighting/energy supplies, transportation/mobility, catering, accommodations, waste, office/IT, and set decoration/props;
- Information sharing and tips on new technologies and developments that are applicable to the various departments of a film production; and
- The acquisition of production data as well as carbon calculator balancing for film and TV productions by MFG and SWR.

PARIS REGION

In 2018, Ecoprod launched a training program to address the education of line producers and production managers in order to enhance their competence in reducing a production's carbon footprint. This is the «Ecoprod Pass», which is composed of two

half-day sessions. The topics covered are challenges linked to climate change, the CO₂ impact left by audio-visual productions, analytical tools and guidelines, and team work devoted to a case study. Since July of last year, 54 professionals have been trained who were awarded an Ecoprod Pass.

SARDEGNA FILM COMMISSION FOUNDATION

In collaboration with the Environmental Agency, the Sardegna Film Commission Foundation launched a short film program that combines sustainable film production with green storytelling. Besides live-action films on different Sustainable Development Goals (SDGs), the initiative features a new twelve-week 2D/3D animation program.

In addition to teaching animation skills and techniques, the training includes a weekly seminar on green policy. Guest speakers, drawn from the ranks of scientists from the community as well as from the Center of Research on Climate Change, lecture on green protocol, recycling and waste management as well as on the world water supply. The first fifteen students who attended the October 2019 – February 2020 seminar can incorporate its content in their stories in order to combine sustainable film production with green storytelling.

TRENTINO FILM FUND & COMMISSION

The Trentino Film Fund & Commission regularly organizes training courses for film professionals. Ever since the *Green Film* rating system was launched, live webinars are periodically conducted (usually about three times a year) for the purpose of informing and instructing film producers on the correct use of this tool.

During the webinars, participants receive a detailed explanation of all the criteria included in the *Green Film* rating system along with their implementation on the set, as well as instructions for making a request for green certification when applying to the film fund. Participants can also ask the instructors questions in real time. The staff of instructors includes one who is responsible for film funding, another who represents the public body that certifies sustainability, and a third who serves as a local green manager.



TOOLS: BEST PRACTICE, CARBON CALCULATORS, AND CERTIFICATION SCHEMES

CANARY ISLANDS FILM

The Tenerife Film Commission created a 10-point Good Practice Guide in 2018 and made it available in Spanish, English, and German versions which recommend:

- Responsible Location Scouting, which means choosing locations that are at short distances from one another, learning the environmental characteristics of each location, and considering the environmental impact of the production in relevant areas.
- *Green Communication*, an essential tool for the implementation of sustainability measures in film production, which informs every department of the production crew of green goals via notices in call sheets as well as by checklists of sustainable actions.
- Protect Locations and their Socio-environmental Surroundings, which means protecting plants, trees, and any other indigenous heritage sites and/or natural resources as well as minimizing noise and light pollution.
- Travel Sustainably: The mobility of a production requires finding accommodations near the location for car-pooling, traveling with fully loading vehicles, and using minimally polluting vehicles.
- Implement more Sustainable Catering: To reduce catering's carbon footprint, a food service company should be chosen that is close to the location and that provides catering services with local as well as seasonal fruits and vegetables and fewer meat dishes. Furthermore, the catering services

should offer fair-trade coffee as well as plates and cutlery which are either biodegradable or reusable.

- Reduce the Use of Materials: Rent materials instead of buying them; choose products with eco labels; use recycled paper and reduce existing paper consumption.
- Reduce, Reuse, Recycle: Avoid disposable products; reuse materials instead; and compost organic waste. Waste management should be supported by correctly planning for the size, type, and number of containers.
- Use Energy Efficiently: Change habits by shutting off unused lights and unplugging devices in stand-by mode. Further measures include using more efficient generators as well as energy-efficient lighting.
- Use Water Wisely: Provide reusable water bottles and refilling stations; select ecological or biodegradable cleaning products; and reduce the volume of water used in flush toilets and washbasins.
- Environmental Monitoring: Evaluate the sustainable measures implemented in a production by hiring a Green Runner or an Eco Advisor; design an environmental monitoring plan with checklists; offset remaining carbon emissions.

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

The Filmförderung Hamburg Schleswig-Holstein offers thorough consultations, which are complemented by a Green Production Guide with best practice recommendations which range from the use of cups and thermal flasks, and the use of flyers to describe the Green Shooting Card, to pre-production advice, the selection of energy-efficient camera equipment, and practical environmental tips for daily call sheets. The goal is to motivate the cast and raise the crew's awareness, so, for example, they understand that traveling by train is less ecologically harmful than flying. Products containing microplastic are banned. A complete check-list is attached to the Green Shooting Card application. The Filmförderung Hamburg Schleswig-Holstein is collaborating closely with the MFG Baden-Württemberg to create a carbon calculator that can be used nationwide. On the national and international levels, the Filmförderung Hamburg Schleswig-Holstein is continuing its longtime partnership with *Green Film Shooting Magazine*, which includes panel discussions devoted to green film production at the Berlinale and Cannes film festivals.



Photo: Tenerife Film Commission

Green Film Shooting panel discussion at 2019 Berlinale



FILM LONDON

The Green Screen Environmental Program was developed by Film London and Greenshoot by using the principles and framework of ISO 140001 in addition to the knowledge and skills acquired from BS 8909 – but customized for the film production industry. The philosophy behind the three levels (Green, Silver and Gold) of the program was to encourage the filming sector to grow and collaborate under the aegis of Green Screen.

Productions start with Green, the first level, which is based on the principles included in a PLAN-DO-ACT checklist. The user quickly understands that small changes can result in a large collective impact. This is coupled with key mandatories: the employment of a green runner; a ban on the use of polystyrene in catering; a policy of not leaving vehicles idling; and a comprehensive recycling program. The production must qualify for certification on the basis of evidence reported by the Green Runner.

The Green Screen Environmental Program offers producers and production companies the flexibility to choose the level, be it Green or Silver, of environmental commitment they wish to make, which then entails having these criteria communicated down to operational management, all employees, and supply chains.

Measuring, monitoring, and analyzing environmental impact are key elements in Green Screen's environmental management system. Recorded evidence of the productions' performance is analyzed against the objectives set forth in the program's environmental action plan, and they are then uploaded to Green Screen. The tracking system and the data reporting are then output in departmental categories, which results in a clear and transparent reporting system. The carbon reduction percentage figures are approximate.

Greenshoot also works with the line producer, who manages the production's budget and accountants in order to track savings on specific items and services such as fuel expenditures, single-use plastic bottle usage reductions, and waste.

The requirements for completion of the Green and Silver Levels are:

Green Screen level 1 – Green: entry level

The producer will:

1. Complete this Environmental Policy which will in turn generate a Crew Memo attached to the first day's call sheet;
2. Appoint a Green Steward to oversee the environmental program and establish a green contact in each department;

3. Implement a production recycling program;
4. Ban the use of polystyrene in the catering department (it is carcinogenic and non-recyclable);
5. Donate unwanted production assets (food, props, clothes, etc.) to charity;
6. Implement a 'Switch off' energy reduction campaign; and
7. Implement a no-idling policy for all vehicles.

Green Screen level 2 – Silver: intermediate

This level includes three additional requirements as well as online tracking:

8. The elimination of plastic water bottles by providing water coolers and re-usable personal water bottles and / or request that crew members supply their own;
9. The distribution of call sheets electronically and;
10. The completion of the Silver-level tracking form to include and data on energy and fuel consumption, waste, and single-use plastic bottle usage reductions.

By October 2019, Green Screen had certified 305 productions which together employed over 10,000 crew members. Of these productions, 156 were shot in London, and they achieved an average carbon reduction of 16.8% across London local authorities. 298,661 single-use plastic water bottles were eliminated from use, which resulted in savings of 29,866 liters of oil which are used in their manufacturing process. £ 30,000 and counting has been donated to charities; the financial savings achieved for these productions exceed £ 75,000.

Green Screen introduced the Silver Level in 2019 because sustainability is achieved by the continual improvement of methods and applications. Silver Level's initial trial took place on Season 3 of Left Bank Pictures' *The Crown*. This level demanded more from the production team because it graded each crew department's performance on a points-based system that required a minimum number (85) to receive certification. Other productions that have obtained Silver certification include *Quiz*, *Behind Her Eyes*, and *Everybody Is Talking about Jamie*.

Green Screen level 3 – Gold: the final step will include:

- Demonstration of social impact;
- Reduction of air pollution;
- Creation of community programs as well as a legacy;
- Compliance with sector and national legislation; and
- Availability of carbon offsetting for productions that achieve a level of sustainability and that want to balance their carbon emissions by requesting, for example, the managed restocking of forests.



FLANDERS AUDIOVISUAL FUND

The VAF treats CO₂ calculation as an important challenge because it is looking for new ways to improve the Flemish CO₂ calculator in order to increase its user friendliness. One requirement for making the carbon calculator easier to use is to quantify logistical choices so that they will show the impact of the transportation of staff and goods when having to choose between Location A and Location B. VAF plans to co-create with Green Screen partners a planning and environmental assessment tool that can be used internationally.

LOWER AUSTRIAN FILM & CINEMA CULTURE / LAFC

With the launch of Evergreen in 2018, the Lower Austrian Film & Cinema Culture / LAFC provided the industry with the first Green Guide for sustainable film production in Austria. The LAFC also extended its scope with the best-practice-orientated Evergreen Prisma, which serves as a training tool for film professionals.

Designed as a digital platform, Evergreen Prisma offers numerous measures applicable to all aspects of green production. Evergreen Prisma is structured along the following categories:

- Tools offers a Green Practice Kit, which includes access to the LAFC's green database, production checklists, and the use of a carbon calculator as well as information on green certification in Austria;

- Transfer contains information about upcoming events, workshops, and educational opportunities;
- Spotlight features a green news blog;
- Pool offers a discussion guide as well as green links to articles on carbon emissions, expenses, and climate change, all of which provide background information;
- Panorama contains best practices, green incentive models, and presents cooperation partners; and
- Connective presents the LAFC networking service and provides a list of green consultants.

Evergreen Prisma (Green Guide) is available at www.lafc.at

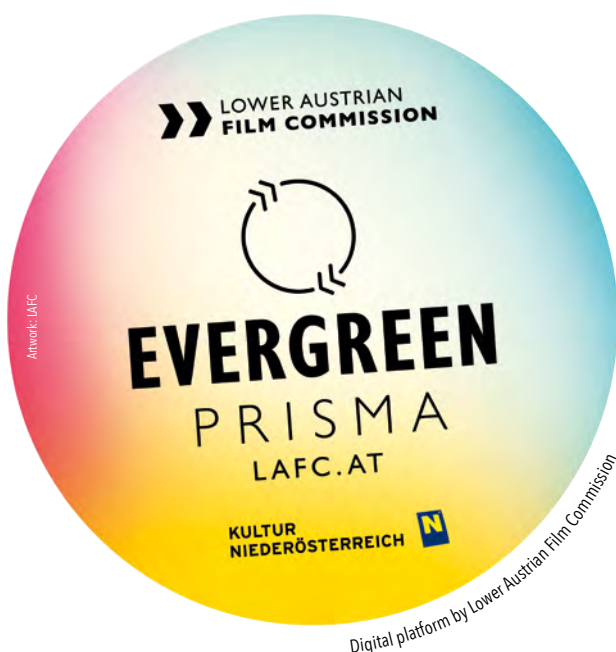
MFG BADEN-WÜRTTEMBERG

The MFG provides film professionals with practical information on lighting, set design, transportation, catering, accommodations, energy, and production office, all of which offer opportunities for more sustainable approaches. Furthermore, the MFG provides an online catalogue with sustainable services for the Baden-Württemberg region. Practical advice targeted to specific departments may be found in its Best Practice Guide.

In order to provide film productions with a tool to measure their CO₂ emissions and to identify areas of potential reductions and savings, the MFG teamed up with the German broadcaster SWR and the Tübingen-based agency KlimAktiv to develop a carbon calculator for film and TV productions. It is based on data collection that measures the level of carbon emissions. The essential data collected during pre-production, shooting, and post-production on electrical power, heat, mobility, crew accommodations, catering, and set decoration are collected, categorized, and calculated. The carbon calculator was initially made available during its beta-testing phase.

SARDEGNA FILM COMMISSION FOUNDATION

Being the first regional film fund in Italy to go green, the Sardegna Film Commission Foundation created a Best Practice Guide, which is updated every two years. The SFC provides a carbon calculator that is suitable for film productions. The film fund is also using the carbon calculator to track compliance with its green protocol by verifying carbon calculations against financial documentation.





SCREEN.BRUSSELS

screen.brussels provides productions with an Excel tool that measures the most significant CO₂ emissions during film production: travel and lodging; energy consumption involved in the transportation of materials; catering; and waste. This Excel tool is also used to chart CO₂ emissions generated by film productions in Brussels.

The Best Practice Guide for Environmentally Friendly Filming in the Brussels-Capital Region provides practical advice with numerous links to service providers as well as to companies. This Best Practice Guide focuses on seven sectors that are critical to eco-responsible film production:

- Transportation organization: various actions can be taken to reduce transportation-related emissions of pollutants and gasoline consumption;
- Materials (set design / costumes): encouraging the use of sustainable materials in order to respect the integrity of film locations as well as of people's health; and the avoidance of waste;
- Energy: limiting the emission of pollutants and the waste of energy resources to the greatest possible extent in order to achieve the resulting cost savings;
- Accommodations: sustainable accommodations for the cast and crew involve a number of criteria: energy savings; waste management; and sustainable purchasing, among others;
- Logistics and catering: ensuring healthy, high-quality food for the crew while minimizing waste;
- Waste management: applying the 4 "R's": Refuse (saying no to what you don't really need); Reduce (waste); Reuse (instead of throw away); and Recycle (what-ever can be reused, lent, or repurposed); and

- Communication: supporting sustainable communication by informing the public as well as professionals about best practices that have been adopted by the audio-visual / film sector and by developing a body of knowledge; encouraging film productions to reduce their carbon footprint in the marketing and distribution of films.

TRENTINO FILM FUND & COMMISSION

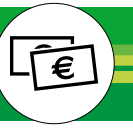
In 2017, the Trentino Film Fund & Commission launched T-Green Film: a rating system developed for fostering environmental sustainability among producers shooting projects in Trentino, Italy. T-Green Film tracked the principal factors of sustainability during film shooting (*i. e.*, energy efficiency, transportation and accommodations, catering, material selection, waste management, and communication) and it showed producers how to implement practical and easy-to-verify actions.

T-Green Film was conceived so that its scoring system tracks sustainability actions that have actually been put into practice during the shooting, which makes it easy to measure the degree of the project's sustainability, and which thus clarifies the film's evaluation for certification as well as its eligibility for reward mechanisms. In fact, thanks to T-Green Film, the Trentino FFC has become the first European regional film fund to grant both green certification and cash incentives to productions that comply with the criteria established by the rating system.

Since its launch, several film and TV productions which used T-Green Film have responded positively to it. This presented the Trentino FFC an opportunity to collect useful feedback on the subject of implementation. During 2019, T-Green Film has been undergoing a revision process aimed at making it directly usable in other national or regional contexts. T-Green Film has become *Green Film*. (See also Policy / Strategies)



Menocchio was one of the first green productions to be certified by the Trentino Film Fund & Commission
Photo: Daniele Baldo



REGULATIONS AND INCENTIVES

CANARY ISLANDS FILM

Nearly 40% of the Canary Islands territory is protected natural wilderness. In some but not all of these protected areas, there are conditions that must be met for film production.

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

As the premiere film fund in Germany, the Filmförderung Hamburg Schleswig-Holstein, starting in April 2020, is going to require that applicants from majority-German film productions shot in Germany commit themselves to complying with criteria established by the Green Filming Badge. The requirements are based on specifications found in the former Green Shooting Card. In particular, the areas of catering, mobility, lighting, and general production techniques offer many simple carbon-saving approaches. The costs involving green measures and crew members are accepted as official line items in the calculation of the budget. Any additional costs that may be incurred due to sustainable shooting practices are already eligible for support. Furthermore, the FFHSH supports production teams with complementary and comprehensive consulting services.

FILM I VÄST

During 2019, Film i Väst broadened its role in helping make the Swedish film industry sustainable. It hired a part-time environmental strategist to work on solving environmental issues in the industry. The environmental strategist also provides coaching as well as advisory services for the company's co-productions.

By using the Film i Väst's application portal, the co-production applicant must submit an environmental plan for production. Film i Väst also provides checklists to support the producer as well as the crew's various professional groups with environmentally-conscious production planning.

FILM I SKÅNE

In 2017, Film i Skåne decided to institute new requirements for companies applying for co-production funding. The online application screen now features a new section in which the applicant is required to describe the environmental strategies the production intends to implement during the production process. The purpose is to raise awareness of environmental strategies among production companies working in Southern Sweden.

Moreover, Film i Skåne's participation in the EU funded Green Screen project is spreading the green message and making positive changes in the region.

FILM LONDON

Film London annually facilitates over 15,000 filming days in the capital through its London Filming Partnership. It is vital that filming in the capital city be sustainable, which benefits the city, its residents, and businesses. Film London published a Guide of Best Practice which sets forth the rules and regulations pertinent to filming in London. This Guide has been expanded to include Guidelines for Sustainable Filming. Taking its inspiration from the French Ecoprod guidelines, Film London has likewise augmented its Best Practice Guide to champion environmental sustainability. These guidelines are intended for the growing number of professionals who seek to integrate environmental criteria in daily work routines and who wish to reduce the use of natural resources. This guide has been designed to help filmmakers make environmentally sustainable choices during production.

Following a suggestion from Network Rail, several London Filming Partners who were keen to incentivize environmental sustainability have joined efforts to create a pilot initiative that offers a 3%–5% discount on location fees for productions that have been certified by the Green Screen Environmental Program. Since its launch, productions such as *The Crown* have taken advantage of the pilot scheme.

LOWER AUSTRIAN FILM & CINEMA CULTURE / LAFC

The Lower Austrian Film & Cinema Culture / LAFC, which provides services for the Film & Cinema Culture of the region, may treat the expense of hiring a green consultant as an eligible funding category, provided that it is within the scope of the film production process.

MFG BADEN-WÜRTTEMBERG

Resource-saving production methods are a priority for the MFG, whose goal is to reduce carbon emissions created by film productions. For this reason, productions may apply for a grant of up to €5,000 for a green consultant to manage all aspects of sustainable production. Beginning in 2020, the MFG is requesting that all applicants deliver a declaration consisting of a self-appraisal of their projects' ecological sustainability. This self-appraisal will be a factor in the funding committee's decision-making process.



PARIS REGION

Applying for an eco bonus:

- An eco bonus is available for theatrical fiction and animated features as well as for TV fiction and animation; however, the eco bonus is not yet available for documentaries. The eco bonus ranges from € 25,000 to € 100,000, which is contingent on the size of the production budget;
- Projects must request the eco bonus (as with any other bonus) when they apply on line. No changes are allowed after the submission has been made;
- The eco bonus is an option under the "Innovative practices and technologies" category, which includes, for example, a VFX bonus;
- The Paris Region film & tv fiction fund can award a supplemental bonus to a project whose funding has been approved by the selection committee; however, it cannot award a bonus to a project that has not been approved by it.

Projects selected for funding:

- Twelve projects were approved for eco bonuses, of which eleven were fiction feature films along with one TV project. As things stand now, all the projects selected by the committee requested an eco bonus, which were granted. But this was only the first step in the process, because it is vital that these eco bonuses be earned by the new movies. Few TV projects are currently requesting an eco bonus. Over the course of time, funding rules will change as practices continue to evolve and become more refined and effective.
- The average eco bonus is € 50,000.

Getting the grant

In the first phase, after the production company submits its subsidiary bonus application, the Paris Region will first request a detailed report. In the second phase, a meeting will be scheduled to clarify details, bills, proof, etc.

SARDEGNA FILM COMMISSION FOUNDATION

The Sardegna Film Commission Foundation's sustainability strategy includes significant incentives for the Sardegna Green Protocol in all SFC selective Cash Rebate Funds. Meanwhile, sustainable film production has become mandatory. The green protocol applies to all feature films and TV shows that are shot on the island.

SCREEN.BRUSSELS

screen.brussels treats the cost of hiring an eco-consultant on a film production as a eligible expense. As a pilot project, screen.brussels also supported the hiring of an a sustainability expert as an eco consultant on four major productions.

TRENTINO FILM FUND & COMMISSION

The *Green Film* rating system (formerly known as T-Green Film – see the relevant paragraph in the "Tools such as Best Practice Guide, Carbon Calculator" section) has now been made available to other film funds across Europe. A central aspect of the rating system, thanks to a scoring system linked to green actions implemented by producers on the set, allows producers to get a direct measurement of the degree to which projects are environmentally sustainable. This enables the adopting institutions to develop new forms of green incentives, either by updating their existing funding criteria or by devising other forms of non-monetary rewards, such as free services or discounts, in order to reward sustainable productions according to their verifiable merits.

WALLIMAGE

Wallimage's new selection criteria will not financially reward projects that are implementing green initiatives; instead, it will penalize those that do not. More specifically, projects that do not demonstrate sustainability in their applications will be automatically rejected. Wallimage intends to implement the new selection criteria in 2020, after it has been approved by regulatory authorities. Once the new selection criteria have been launched, Wallimage will grant a six-month adaptation period to its producing partners.



INNOVATION

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

Northern Germany is one of the first regions European-wide to have a rental company that provides an innovative solution for storing electrical energy. Developed by a German company, the zero-emission generator outputs up to 176 kWh and 100 kW, which can easily accommodate heavy power consumption over a long period of time. A hybrid battery is mounted on a trailer so that it can be hitched to a car. The unit recharges in less than eight hours at a Type 2 connector, which is the European standard for e-mobility.



Zero emission generator

Photo: Polyma

FILM LONDON

The London film and TV industry is booming after having experienced steady growth over the past two decades. Film London estimates that 70% of UK film and TV production takes place in and around London. Film & TV productions that shoot on location power their Unit Base, *i. e.*, the production and technical vehicles, with diesel generators which consume an average of 80 liters of diesel over a twelve-hour operational period.

In order to achieve the Mayor's goal of London becoming a zero-carbon city powered by clean energy by 2050, Film London acted on an inspiration found in a case study conducted on its Green Screen partner VAF for the TV series *Buck*, which reduced carbon emissions attributable to energy usage by 93%. Filmed mainly on location in a rented house in Keerbergen, Flanders, the crew installed a temporary electrical distribution box for its power supply. This has many advantages when compared to traditional diesel generators:

- it is much cheaper than a traditional generator. The production only pays for the connection charges and the electricity it consumes;
- it allows the production to choose a renewable energy provider;
- by avoiding fossil fuels, an electrical distribution box reduces CO₂ emissions and air pollution;
- it produces much less noise;
- an electrical distribution box is more efficient because no electricity generation is wasted; and
- it is a user-friendly plug-and-play tool because there is no need to refill a generator with fuel.

By using mixed energy supplies from the local grid (1.93 tons of CO₂ over 11 days), the distribution box (0.28 tons of CO₂ over 60 days), and generator (0.23 tons of CO₂ over 2 days), *Buck's* energy strategy generated total emissions of only 2.44 tons of CO₂. In comparison, using a generator for the entire seventy-three-day shoot would have generated 38.1 tons of CO₂.

Inspired by this best practice, Film London developed the Grid Project which will supply green energy via the city's electrical grid to seven key Unit Base locations that are frequently used by productions filming on location. At each of these London Unit Bases, one or two electrical supply cabinets will be permanently installed so that productions can simply tie in to electrical power. These highly secure cabinets, which are constructed in steel, will offer remote metering. It is foreseen that each cabinet will be outfitted with between seven and nine single and 3-phase outlets each.

The project team recommended that the first stage of implementation take place at a pilot site in a controlled area that is frequently used as a film and TV production location. The Grid Project is supported by the Industry Advisory Group (IAG), which is composed of experienced location managers, unit managers, and facilities captains. As the first location for the Grid Project electrical cabinets, Victoria Park in Tower Hamlets was chosen. UK Power Networks provided detailed estimates for installation and connection of the cabinets to the nearest sub-station. The Grid Project cabinets will eventually be installed at Victoria Park / Tower Hamlets, North Horse Ride / Westminster and Battersea Park / Wandsworth.

In order to analyze the environmental impact of the electrical cabinets in Victoria Park, the IAG and the service company Arup collected information from productions on the specific types and sizes of diesel generators that were used, as well as their peak- and low-usage times. According to Arup's analysis, in 2018 generators in Victoria Park consumed 64,082 liters of diesel and 1,656 liters of petrol, which emitted 169,556 kg of CO₂.



INNOVATION

The Grid Project would provide significant environmental benefits to the film and TV industry:

- CO₂ emissions would be reduced to nil;
- the Grid Project would reduce Diesel Particulate Matter (DPM) as well as nitrogen dioxide (NO₂) gas emissions from film and TV productions at unit bases to zero;
- the Grid Project would significantly reduce the noise pollution created by diesel generators at unit bases; and
- the Grid project could act as an example of good and innovative practices for London within the purview of the SECAPS / Covenant of the Mayors, of which London is a signatory.



Diesel-generator powered truck
Photo: James Waller

of electrical cabinets in three sites: Victoria Park, Battersea Park, and North Horse Ride. Next, the project team is identifying sources for match-funding for the remaining 50% of the project costs.

Film London has secured Interreg Europe pilot action funding towards the pilot site at Victoria Park.

Film London is submitting a funding application to the Good Growth Fund (LEAP) for 50% of the funding for the installation

SCREEN.BRUSSELS

screen.brussels is teaming up with innovative companies, such as Rotor DC, which recycles construction materials diverted from the waste stream. Besides operating a walk-in store, Rotor DC services building owners, contractors, and architects. The Belgian company MCB has joined the effort to provide set designers with reusable modules.

GREEN SCREEN

STUDY ON INNOVATION IN THE AUDIO-VISUAL INDUSTRY

Green Screen launched an innovation study in order to lock down approaches to carbon mitigation techniques, identify environmental impact and solutions, and improve cost-efficiency. After assessing 349 EU funded innovations (2014 - 19) from Horizon 2020 and from the European Institute of Innovation and Technology (EIT), an innovation expert, working in partnership with the French audiovisual production industry, provided an in depth analysis of 30 of them against the following criteria: efficiency in carbon reduction (as well as other impacting environmental factors); technical advances; and economic benefits. This effort covers five links in the audio-visual industry chain: Pre-production; Production; Post-production; 3D Animation, CGI, and Visual Effects; and Broadcasting across twenty-four processes, among them off-grid power supply/genset, set construction, workflow pipeline, and processing.

The study highlights examples from every step in the chain of production:

- **Pre-production:** Instead of traveling by airplane or car to co-production meetings, a video conference is suggested, which saves about two tons of CO₂. Apart from ameliorating the environmental impact of such meetings, the production saves time and money;

- **Production:** Instead of using diesel-powered generators, a production may use a hydrogen-powered genset, which is now in development and will be available for beta-testing in 2020. By using green hydrogen instead of diesel, the release of 8,98 kg CO₂ per kg into the atmosphere could be avoided;
- **3D Animation, CGI, and Visual Effects:** Using a machine-learning dispatcher in a High-Performance Computing Data Center (HPC) saves rendering time and costs; and
- **Post production:** Automated scripts will power Virtual Machines and link them according to needs and service hours, and enable cloud-based processing of audio-visual workflows. The benefits are higher productivity and lower bandwidth consumption.
- **Broadcast:** Instead of a conventional Content Delivery Network (CDN), a hybrid CDN which combines standard unicast with Peer-to-Peer (P2P) can be used for IPTV and OTT streaming in HD so that the bandwidth for video content could be greatly reduced.



GREEN PRODUCTIONS: CASE STUDIES

CANARY ISLANDS FILM

The Tenerife Film Commission is leading a Pilot Certification Project on Sustainable Production that began with the first green productions:

Season 3 of the animated TV series *Cleo* for Spanish National TV (RTVE) is produced by the animation production company La Casa Animada.

Soñando con alas (*Dreaming with Wings*) is a documentary produced by the Birding Canarias organization about dedicated bird-watchers.



Documentary *Soñando con alas*

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

Since the Green Shooting Card was launched, more than 160 eco labels have been awarded to a wide variety of productions: features films, TV movies, shows, series, short and student films, animated projects, and 3D films. In 2019, the demand for the Green Shooting Card increased 30% – 40% percent. A recent production that received a Green Shooting Card is the award-winning German feature film *System Crasher*, which has been suggested for the 2020 Foreign Language Oscar.



The German series *Notruf Hafenkante* was awarded a Green Shooting Card

Besides productions which have received a Green Shooting Card, several long-running TV series are implementing new tools and best practices in order to achieve even greater levels of sustainability. The ZDF pre-prime-time serial *Notruf Hafenkante*, which received a green label in 2015, keeps rethinking its workflow routines in order to benefit the environment – even if it means greater attention to detail, persuasion, and time.

In order to shake up the cast and crew's ingrained habits, sustainable measures are listed on daily call sheets, which are sent out electronically, of course, via computers that are powered by energy produced in an eco-friendly manner. Energy consumption has been reduced by using energy-efficient lighting equipment, rechargeable batteries, and fixed power connections on set. Instead of using traditional diesel generators for exterior shots, *Notruf Hafenkante* was one of the first to begin using a hybrid battery generator. The electric power package offers the advantages of noiseless and reliable operation. To minimize the environmental impact of the production and to strike a climate-friendly balance, catering is already 50% vegetarian.

Notruf Hafenkante has one great advantage because the production has always been shot on the same locations ever since the pre-prime-time serial premiered in 2007. The interiors of the police station as well as those of the hospital are shot in a former warehouse in the northern part of Hamburg which has been remodeled to serve as a film studio. The main locations for the exteriors are the German Coast Guard base in the old warehouse district on the harbor, as well as the Port Authority of Hamburg, whose facade is used for the hospital location.



FILM I SKÅNE

In order to realize Film i Skåne's long-term vision and support the development of sustainable film production in Southern Sweden, the production of the Southern Swedish TV series *Systrar* made itself available to serve as the subject of a case study. The objective was to devise a set of environmental criteria that could be used to implement and then evaluate sustainable film production in Southern Sweden. More specifically, the criteria should evaluate whether existing carbon-footprint calculation tools were appropriate for the unique requirements of Southern Sweden.

Systrar is a mini-series, a historical drama set in the late 1960s. It involves about twenty-five cast members and fifty-eight crew members. The production manager joined the case study in May 2018 after pre-production had already begun. The *Systrar* production followed many conventional practices in film production that prioritize time and cost-efficiency. These practices may be viewed as sustainable.

Pre-Production

- **Travel:** Most meetings were conducted remotely online. A number of train trips were made between Stockholm and Ystad. Train travel makes a relatively low impact on the environment because Sweden for the most part produces electricity in an environmentally-friendly manner.
- **Car rental:** Diesel- as well as gasoline-powered automobiles were rented in Skåne for location scouting; the staff car-pooled. The car-rental companies did not have electric vehicles available.

- **Location Selection:** The criteria for choosing a location was whether it was suitable for a historical piece set in 1968. Next, the proximity to other locations and permit requirements were taken into consideration. Projects funded by Ystad Österlen Film Fund require principal photography to be shot in Ystad; Film i Skåne requires shooting in Skåne. This resulted in a greater number of locations than the average production, although attempts were made to limit filming to the fewest number of locations possible.
- **Staff Recruitment:** Most of the crew was recruited locally. Some crew positions, such as gaffer and grip, could not be filled in Skåne for various reasons.

Production

- **Travel:** For the shooting days scheduled in Sjöbo, accommodations for the cast and crew were booked in a hotel in Ystad, which meant traveling daily to the location. This prevented some people from flying home during weekend breaks. During this period of shooting in Ystad, many cast and crew members walked or biked to the shoot.
- **Waste:** The craft table produced most of the waste during production, especially on days when there were many extras on set, because it was unfeasible to provide the additional cast members with reusable cups.
- **Electricity consumption:** Electricity charges were based on the amount of metered on-time usage, which incentivized good behavior in switching off lighting equipment that was not in use.



The Swedish mini-series *Systrar 1968*, a historical drama

Photo: SVT



GREEN PRODUCTIONS: CASE STUDIES

- **Carbon Calculator:** The *Systrar* production calculated its carbon footprint by using different carbon calculators: Albert, which was provided by the BAFTA consortium and the Green Production Guide by the Producers Guild of America (PGA). Neither calculator explicitly shows which factors, for example, carbon emissions per/km by car, are being used for the calculations. While neither one nor the other of the calculations can be exact due to insufficient data, it is apparent that Albert computes a lower estimate. Also, the PGA calculator yielded results only in whole numbers, which meant that emissions attributable to electricity and accommodations could not be compared. Neither calculator offered the option of including data on either dietary choices or food waste.

Because these tools are likely to underestimate carbon impact when used in a Swedish context, the case study concluded that a separate carbon calculator will be needed for Sweden and Northern Europe.

FILM I VÄST

In 2019, Film i Väst selected the TV series *Bäckström* to conduct a pilot project on a larger production. The project consisted of environmentally coaching the production process, reducing environmental impact, documenting and calculating CO₂ emissions, as well as evaluating experiences the pilot project yielded and sharing them.

Film i Väst's environmental strategist joined the crew during pre-production. The film's producer even issued an official mandate to use environmentally friendly methods. Together with the producer, they drew up a comprehensive plan for environmental measures that were to be taken, which included a communication and environmental policy. Department Heads were given support to set environmental goals for their respective areas of responsibility.

In order to conduct CO₂ calculations, routines were set up to document all activities that put a strain on the environment. The goal was to find methods that would place the least amount of administrative burden on production management. The calculations were conducted by an independent consultant.

FILM LONDON

The shooting of *Sweetheart*, a feature film which was produced on a micro budget of £ 150,000, successfully implemented several sustainable measures. Principal photography took place on



Photo: Jonath Mathew
Evert Bäckström in the Swedish TV series *Bäckström*

location at Freshwater Beach Holiday Park, Dorset, where the cast and crew was asked to take responsibility for recycling, energy savings, and waste management.

Recycling: The recycling facilities on-site were limited to bins for bottles (brown, green, and white). Crew members drove to the nearest farm to donate food waste for composting.

Water: The majority of cast and crew members brought their own water bottles, which they refilled with tap water either in their accommodations or at public park facilities, which eliminated about 500 plastic water bottles from use. For night-time shoots, when water from the park's facilities was unavailable, the crew bought large water bottles (approx. 1 gallon) which were shared. For hot drinks, each cast and crew member received a cup which they could keep after production wrapped.

Saving energy: The crew turned off all lights in their rooms and/or caravans when they were not in use. Make-up and costume unplugged all electrical devices when they were not in use. The sound department turned off battery operated playback over-the-ear headphones during each break or set change. Due to the low budget, lighting was limited. On night-time shoots, the production utilized the facilities' existing ambient lighting to the extent possible; only one tungsten light was used when needed.

Saving paper: The art department used digital breakdowns while the script supervisor used printed sheets for edit notes each day; all other documents were viewed and edited on a laptop. Because of limited Wi-Fi availability in the area, the production had to print a few documents during the eighteen shooting days. Recycled paper was exclusively used.



Reusable items: The set designer was asked to source props locally. The production designer lived within thirty miles of the film location. When production wrapped, the props and costumes that could be recycled were either returned or sold to cast and crew members.

Case study on paperless production

In order to conduct a case study on integrated paperless solutions for the film and TV industry, the London-based company Greenshoot teamed up with Moneypenny, a provider of production software for accounting, payroll, and workflow.

In order to illustrate the environmental impact of paper consumption, the case study analyzed the paper usage of the production of a TV drama as well as its associated carbon footprint. According to the Environmental Paperwork Network (EPN), the production of one ton of non-recycled paper requires up to 24 trees and between 1,151 and 2,500 litres of petroleum consumption. Moreover, the water footprint for a single ream of A4 paper (80 g) requires 10 litres of water.

Film and TV productions typically print out scripts, administrative documents, script sides, schedules, AD Reports, unit and supplier lists, movement orders, risk assessments, production diaries, invoices, and time sheets as well as bank statements. By going partly paperless, this drama production, which had a crew of 220 members on the payroll for ten weeks, used digitized call sheets, purchase orders, contracts, and all accounting reports. By using Moneypenny's software in the accounting department as well as for call sheets, the production's paper usage dropped by 42,166 sheets of A4 paper, which reduced the number of hard-copy print outs from 141,714 A4 pages to 99,548 sheets. The report concludes that by going partly paperless, paper consumption

was reduced to 15.38 tons of CO₂ emissions, while 5.17 tons of CO₂ of emissions had been prevented.*

The carbon footprint calculation also includes the carbon emissions of the toner cartridges used on the production for printing, the storage of confidential paperwork, and transportation as well as the cost of treating waste.

Following the calculation model supplied by the Department for the Environment, Food and Rural Affairs (DEFRA) along with IPCC guidelines, Greenshoot also took into account the emissions created by the entire supply chain, which included the storage and distribution of fuel.

The report also highlights the financial savings generated by the reduction in paper usage, which amounted to £ 13,225.43. If the production had gone one hundred-percent paperless, the resulting financial savings would have been £ 20,142.90.

* The report did not take into consideration the energy usage of: digital devices; the data centre; and the related amount of emissions from burned fossil fuels. It also did not take into consideration the impact of production, transportation, and electronic waste attributable to the digital devices that were used during the ten weeks of production.

FLANDERS AUDIOVISUAL FUND

The sustainably-produced projects supported by the VAF include the feature film *Gangsta* and the TV series *Buck*. During the shooting of *Gangsta*, for example, numerous sustainable choices were made:

- Accommodations: The production rented one apartment for four department heads near the film set in Antwerp, where the majority of the shooting took place.
- Transportation: The production used the parking lot of a local tow-truck company for parking spaces for production vehicles. Since both crew members and trucks stayed near the set, the production significantly reduced the amount of miles driven to and from the set – about 19,000 km – which saved € 10,000 euros and prevented three tons of CO₂ from being released into the atmosphere. By staying locally overnight, crew members no longer had to commute.
- Although the *Gangsta* production was as sustainable as possible, travelling to Morocco for three shooting days nearly doubled the production's carbon footprint. 114,000 km of air travel increased the overall carbon impact to 30 tons CO₂.



GREEN PRODUCTIONS: CASE STUDIES

LOWER AUSTRIAN FILM & CINEMA CULTURE / LAFC

Inspired by Lower Austrian Film & Cinema Culture / LAFC's first green workshop, the Lower Austrian company Gebhardt Productions decided to go green in its production of TV shows, series, and films. Its first sustainable project is the new TV crime series *Soko Kitzbühel* – Episodes 252 – 257, which was in production April – October 2019.

The project has been certified for the Austrian Eco Label for Green Producing through the Federal Ministry for Sustainability and Tourism (BMNT), which requires the production company to meet various environmental targets in the production process.

The criteria include building awareness through internal and external communication, sustainability in the production office, saving resources on set by reducing waste as well as energy consumption in transportation, catering, and accommodations.

MALLORCA FILM COMMISSION & FUND

Palma Pictures, a Mallorca-based production company for film, TV, and photography in Spain, is also committed to social responsibility. Palma Pictures works with crew members, clients, and suppliers on a daily basis to create a more sustainable approach to high-quality film production. Since 2010, Palma Pictures has been awarded an ISO 14001 & EMAS certification each year for environmentally-friendly practices it has instituted. Its actions include a company-sponsored Environment Day, meat-free Fridays, reusable water bottles, the donation of leftover food, the re-use of props and set pieces, and waste management. The office recycles paper, printer cartridges, and beverage cans while the on-set catering company separates food packaging and beverage cans from the general waste.

The lighting department keeps old polystyrene reflectors, which it sends to a local plant for re-purposing as construction material. Palma Pictures uses an authorized waste-disposal company to cart hazardous waste (automobile mufflers,



Green Shooting in Mallorca

batteries, and electronics) in order to dispose of them safely. They have a rental house where they lend costumes. Subsequent shoots are charged a small flat fee to rent as many costumes as are necessary.

The company's goal is to minimize its environmental footprint, to create a great workplace environment for employees and clients, and to promote diversity within the company.



MFG BADEN-WÜRTTEMBERG

During the production of the German tragicomedy *Sturm – bis wir tot sind oder frei!*, carbon emissions were reduced across the board by four measures:

- Flights under 400 km were not permitted for travel to the film location;
- Crew members, who were responsible for bringing their own cups, relied on water dispensers;
- Print outs of the script were made only for actors; call sheets were delivered digitally; and
- During the studio shooting in Ludwigsburg, construction materials were used that cut the cost of waste management in half.

Other green productions include:

- The interactive Sci-Fi film *Cobalt*, which combines feature film elements with interactive storytelling, was shot in September/October 2018; and
- The divorce drama *Der Weg nach Padulim*, which was produced by EIKON Stuttgart and StudioTV.film in late summer 2018.



SARDEGNA FILM COMMISSION FOUNDATION

The Sardegna Film Commission Foundation's green policy supported several feature films and series, including *Figlia Mia*, *Twin Flower*, the TV series *Catch-22*, and the recent dramas *Lanjeron* and *The Way Things Go*, all of which were shot on the island.

The 2018 Berlinale Competition entry *Figlia Mia* by Laura Bispuri has become a model for best practices in green production. Starting with an internal communication strategy to inform crew members of the green approach, the producer also reached out to hire local residents to work on the production as service providers and extras. Catering never served pre-cooked or prepared meals in plastic. Instead, a local cook prepared meals with fresh, high-quality produce that was locally sourced. Even when the crew was working on location out in the open, the cook would set up portable stoves to prepare meals on site. During breaks, locally grown strawberries and watermelon were served instead of deserts and/or industrial snacks. Involving local residents in the production served as an advantage when it came to waste management because the Sardinian crew members were already familiar with the waste management system.

The *Figlia Mia* production also reduced the number of cars and trucks it used, and it also avoided, whenever possible, trailers



Valeria Golino and Alba Rohrwacher in *Figlia Mia* (Daughter of Mine) by Laura Bispuri

that required generators. When shooting on location in a small village, actresses Alba Rohrwacher and Valeria Golino were even able to bicycle to the set.

Meanwhile, the Italian-Austrian co-production *The Way Things Go* by Giovanni Pompili was shot on a single location in Sardinia where the cast and crew were accommodated in a green-certified hotel.



Valeria Golino and Sara Casu in *Figlia Mia* (Daughter of Mine) by Laura Bispuri



TRENTINO FILM FUND & COMMISSION

In 2018, Trentino hosted the shooting of *Sanctuary*, the first international co-production (by Yellow Bird and TV4) of a TV series that adopted the *Green Film* rating system. This was a good occasion to test the rating system as well as the certification procedure on a high-budget project that was led by a foreign production company, which also included a foreign cast and crew.

The feedback the Trentino Film Fund & Commission received from the producers on the implementation of sustainability measures covered by the rating system was positive, and it sparked the process of exporting *Green Film*.



Photo: Picomedia/Warner Bros

Shot sustainably in Trentino: *Il testimone invisibile* (The Invisible Witness) by Stefano Mordiani

GREEN SCREEN

GREEN SUPPLIERS

As part of the Green Screen Program, the Ystad Municipality and Film i Skåne have been working on a project to identify companies and suppliers that can deliver sustainable production services during film shoots in the Skåne region.

They concluded that producing a list of green suppliers is time-consuming because it is difficult to find accurate information about an individual company's sustainability efforts.

The study also showed that, despite the lack of certified suppliers, many suppliers do engage in active environmental efforts and are thus capable of providing sustainable solutions for film productions, which extend to recycling, waste management, the use of non-toxic materials, organic food, transportation, and other services that promote sustainable development. One reason why small companies forgo certification is that it is too expensive.

Criteria for Green Suppliers

Fundamental requirements

- The company must be engaged in active environmental efforts that are ongoing, that have been developed over time, and that relate to the Sustainable Development Goals (SDGs).

- The company must provide an accurate description of its sustainable development work and it must indicate which SDGs it is pursuing. It must also identify to which industry it belongs as well as which goods and services it provides.

Other criteria

- Environmental certification, e.g. ISO 14001
- Environmental policy
- Other relevant sustainability certifications

Questions for a sustainable supplier

- What sustainable issues are you working on?
- Do you have an environmental policy or certification?
- Is the hotel environmentally certified?
- Is vegetarian/vegan and organic food served?
- How is food waste handled?
- How is food delivered?
- Do you use environmentally friendly cars?
- Do you use renewable fuel for vehicles?
- Do you have environmentally friendly alternatives for materials?
- Do you use eco-labeled cleaning products?
- Do you provide electricity from green sources?



PARTNERSHIPS

CANARY ISLANDS FILM

Local production companies that take sustainable approaches include:

Location One Islas Canarias is a green service provider that offers to production teams tools and systems: eco-portable bathrooms with solar-panel generated energy to heat water as well as recycling water from the sink to the toilet; LED lighting towers and battery lights; the towing of clean and dirty water tanks to and from the set; and the procurement of production materials, including marquees, generators, seats, tables, coat stands, walkie-talkies, make up mirrors, etc.

Seven Islands Film, with locations in Tenerife and Gran Canaria (see <https://mailchi.mp/afdc48e5ce4/hello-to-winter-season-start-sustainable-productions>), provides full production services for drama, TV, and commercial productions. Their sustainable production services include affordable electric cars as well as reusable bottles, which can be refilled by water dispensers located on set. Seven Islands Film offers further green measures, which include a payroll app to reduce paper consumption, energy efficient lighting as well as catering with fair-trade products, and locally grown fruits and vegetables served on reusable dishes.

Canary Productions and Fixer Canary Islands are together launching a service production company for green production. Aproductions avoids the use of plastic water bottles.



A green production seminar at the Hamburg Media School
Photo: FFHSH

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

Since 2015, the Filmförderung Hamburg Schleswig-Holstein has been collaborating with the Hamburg Media School (HMS), where green production techniques have become part of the curriculum. Thanks to this contribution, the alumni of the Hamburg-based film school continue to shoot green. The HMS will also implement a Green Producing module in their new course on the communication of values in advertising. Green production knowledge will be supervised by the Film Commission of Hamburg, which also offers bi-annual lectures at the College of Fine Arts.

FLANDERS AUDIOVISUAL FUND

The VAF is member of the Pulse Transition Network. This network brings together hundreds of organizations in Flanders that work with young people, media, and culture to share experiences in order to become more sustainable, to involve the public, and to use creative narratives to address sustainable challenges. (See www.pulsenetwerk.be)

IDM FILM FUND & COMMISSION

In 2016, the IDM Film Fund & Commission introduced a Joint Task Force with the Nature Reserves of South Tyrol. This interdisciplinary team created a questionnaire that production companies



Photo: Seven Islands Film

Seven Islands Film provides reusable water bottles in the Canary Islands



PARTNERSHIPS

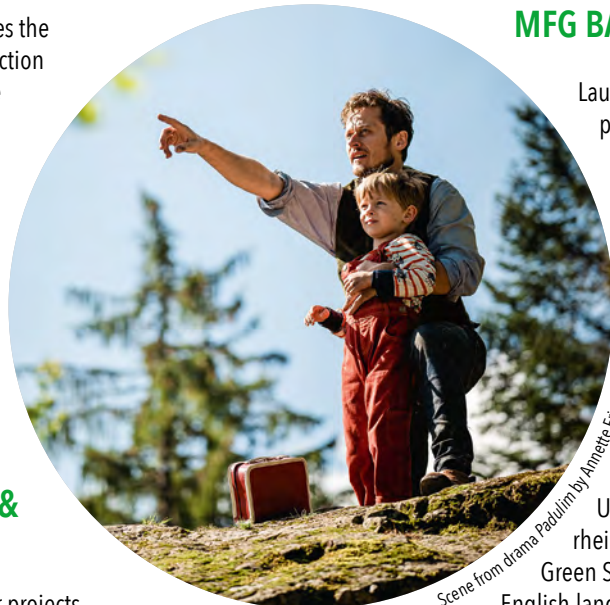
are required to complete. It evaluates the suitability of the audio-visual production for the flora and fauna of the Nature Reserves. On the one hand, by its involvement in the early stages, the Nature Reserves can propose alternate shooting locations in order to reduce the possibility of harming these protected areas; on the other hand, the Nature Reserve's report will be taken into consideration when making a funding decision.

LOWER AUSTRIAN FILM & CINEMA CULTURE / LAFC

Being a public service institution for projects, production companies, and film creatives, the Lower Austrian Film & Cinema Culture / LAFC teamed up with the Academy of Austrian Film. At the 2020 Austrian Film Awards, which were held in Lower Austria in January 2020, sustainable filmmaking was the main topic at this gala event. The 2020 Austrian Film Awards also served as the platform for the launch of the LAFC Evergreen Prisma. (See above, Tools: Best Practice Guide / Carbon Calculator.)

MALLORCA FILM COMMISSION & FUND

The Mallorca Island's Council and the Fundació Mallorca Turisme, respectively the Balearic regional government along with its Ministries of Culture and Environment and the Balearic Tourism Agency, are together supporting an environmentally-friendly audio-visual sector. The Association of Audiovisual Producers of the Balearic Islands (APAIB), THE BASE Film and Photo Association, and The Association of Cineastes of the Balearic Islands (ACIB) are committed to utilizing sustainable production methods.



Scene from drama *Pabulum* by Annette Fiedmann

MFG BADEN-WÜRTTEMBERG

Launched in January 2018, the European Interreg project *Film en Rhin Supérieur – Film am Oberrhein* brings together twenty different partners from France, Germany, and Switzerland. The aim of the three-year project is to develop innovative funding concepts, to create spaces for creative initiatives and experiments, and to support co-operative and cross-border projects.

Under the aegis of Film am Oberrhein, the MFG is responsible for Green Shooting. It organized a three-day English-language Green Consultant seminar in Freiburg in April 2019. The advanced training seminar was attended by participants from Germany, France, and Luxembourg. In November 2019, film industry members from the Upper Rhine were invited to visit suppliers that offered sustainable services; they were also invited to attend an introductory workshop on green production in Strasbourg.

Moreover, the MFG, Agence Culturelle Grand Est, and Région Grand Est are taking a cross-border approach on a production guide that will list suppliers of sustainable services in the Upper Rhine Region.



Photo: FMT

Green shooting in Mallorca

As part of its commitment to sustainable film production in Baden-Württemberg, MFG is a coordinating member of the German Green Shooting Working Group. Members include representatives of broadcasters, film institutions (Filmförderung Hamburg Schleswig-Holstein, SWR, ZDF), and larger production companies. The Working Group meets twice a year to exchange experiences as well as to frame the dialogue on timely ecological topics for the industry.



PARTNERSHIPS



SARDEGNA FILM COMMISSION FOUNDATION

Sustainable production in Sardinia has even made an impact on the infrastructure of the service sector. Hotels are applying

green strategies to advertising and promotions with offers featuring complimentary electric bikes for guests and swimming pools whose water is recycled for watering gardens; they are also involved in strategic partnerships with local manufacturers, including furniture makers. Sustainability also headlines restaurants and food providers who want to offer the role of promoting traditional local cuisine to a star chef.

SCREEN.BRUSSELS

screen.brussels takes additional measures by working closely with regional institutions that are involved in sustainable development as well as in environmental protection by collaborating with the circular economy cluster in greater Brussels-Capital Region, and by promoting the Eco Dynamic label for qualifying businesses that work with the Brussels Environment Agency. For example, the partnership with bruxelles.propreté, a regional agency, provides productions with free garbage bags. By simply completing a form, a production team can receive a temporary badge that will give it unlimited access to Brussels' waste disposal centers. screen.brussels also collaborates with the Flanders Audiovisual Fund (VAF).

GREEN SCREEN

A JOURNEY OF INSPIRATION AND ACTION

The Green Screen program emphasizes interregional learning and shared knowledge.

Key take-aways:

- Regardless of budget, each production can benefit from sustainable practices;
- Sustainable production offers a potential impact on society that transcends the reduction of the carbon footprint of any single production;
- Sustainable filming is not only affordable, but it can also save money and reduce the production budget;
- Sustainable practices are easy to apply; and
- Financial incentives can effectively reduce the carbon footprint of film or TV production in numerous ways, which would thus allow individual regions to develop tailored solutions to address their specific needs and to meet uniquely characteristic objectives.

Sharing best practices:

ProMalaga is working with VAF's carbon calculator to enhance its own calculator and align it to the Spanish production template. Both the Slovak Audiovisual Fund and Film i Skåne

are reviewing their funding guidelines to incorporate green protocols from VAF as well as from Ecoprod's Ecobonus.

Bucharest is working closely with Castel Film Studios to improve sustainable practices involving materials, set construction, and props. Inspired by a visit to Castel Film Studios and Reserve des Arts in Paris, VAF will be working to embed more innovative circular-economy solutions into its program.

Rzeszow is incorporating solutions from VAF, Ecoprod, and Film London to develop guidelines for filmmakers in order to protect its cultural heritage as well as its natural resources.

Inspired by a Belgian TV company's approach, Film London has developed the Grid Project, which intends to install electrical cabinets in key London filming locations.

The Paris Region is analyzing innovations that are transferable to the audio-visual production sector by matching innovators with audio-visual companies that are willing to act as beta-test sites for their inventions through pilot programs.



STUDIOS AND BROADCASTERS

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

Studio Hamburg Letterbox adopted the Green Shooting Card program early on. It started in 2012 with sustainable production measures on the pre-prime-time serial *Großstadtrevier*. Meanwhile, numerous TV movies, series shows, and the feature films *Simpel* and *The Pepper Corns* were awarded the Green Shooting Card.

FLANDERS AUDIOVISUAL FUND

The VAF coached the production staff of the TV series *Buck*. Produced by Zodiac and the Flemish broadcaster VRT / Ketnet, the location crew used an electrical box which had been originally designed for construction sites as a power supply. The crew requested a connection with the local power distribution company. By getting the energy directly from the grid instead of using a generator, the *Buck* production saved 36 tons CO₂ and € 12,000.

The experiences gathered from the *Buck* production led to the decision by the Flemish public broadcaster VRT to incorporate both sustainability and SDGs into its charter. The VRT is studying concrete ways to implement sustainable policies in its normal course of business.

MALLORCA FILM COMMISSION & FUND

Palma Pictures, the principal production company on the island, introduced a full sustainability program in 2009 for its productions as well as for the management of its studio premises and equipment. Palma Pictures collaborated with the MFC on the implementation of these measures.

MFG BADEN-WÜRTTEMBERG

The German broadcaster SWR has taken a wide variety of measures to reduce the carbon emissions created by its productions. These measures were identified and tested as part of a university thesis, which concluded that undertaking these measures would require seed capital. In 2019, the SWR funded a program to develop resource-saving production methods and to test innovative new sustainability techniques. Sustainability Day in March 2019 featured lectures on sustainable technical developments and green shooting methods.

The SWR productions *Tatort* and the weekly *Die Fallers* serve as testing sites for the suitability of new equipment, which helps determine the technology most favorable for further investment.



Green Shooting Card for the German drama *Simpel* with Fredrick Lau and David Kross

A selection of these measures includes:

- LED panels and Fresnel lenses;
- Electric-powered generator;
- Street Scooter and other electric-powered vehicles;
- Green-certified construction material and environmentally-friendly colors;
- A switch to digital communication and the use of recycled paper;
- Travel by train instead of plane;
- ReFood;
- Waste management; and
- The use of MFG's carbon calculator.

Responsible, ecologically sustainable production should become part of corporate culture. For productions assigned to outside contractors, the SWR added a sustainability clause to its production contract which commits the producer to taking ecologically sustainable production approaches.



SUSTAINABILITY BEYOND PRODUCTION

CANARY ISLANDS FILM

The Tenerife Film Commission collaborates with the Canary Islands International Environmental Film Festival (FICMEC) in Garachico, Tenerife (see <http://ficmec.es>), which was the first Environmental Film Festival in Europe. In 2020, the festival will give an award for the most sustainable production. The festival itself lowers its carbon footprint by implementing measures such as car-pooling and low-emission vehicles, minimal reliance on printed materials, and the consumption of Slow Food.

The festival organizes various activities to educate young people about nature, agriculture, sustainable food, as well as their impact on the climate. It also features a student short film contest called the Eco Express, which encourages diverse insights into ecological themes which makes it one of the most exciting and necessary discussion topics of the new century. Last but not least, the Tenerife Film Commission presented the 10-point Good Practice Guide at the Green Commercial Production panel during the Málaga Film Festival.



Powered by renewables, the CineCiutat arthouse theatre in Palma de Mallorca

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

In 2018, the FFHSH organized a green cinema workshop that introduced exhibitors to upcoming legal requirements, best practices, and suggested actions for operating their cinemas in a more energy-efficient and cost-saving manner as is outlined in *The Green Cinema Handbook*. Green best practices for cinemas were also part of the jury's criteria, which in 2019 awarded the main Cinema Hamburg Prize to Abaton, the Hamburg-based arthouse cinema.

The goal is to shape the entire workflow around sustainability. Starting in April 2020, the FFHSH will also require compliance with minimum ecological standards in film distribution, which will also become a fixed condition in the application process.

FILM LONDON

As part of the Green Screen European partnership, Film London reached out to a variety of cinemas to determine which sustainable practices have already been implemented. Film London hosted several events where sustainability in cinema was discussed among industry professionals. At the Exhibitor's Breakfast, Film London presented Julie's Bicycle, the Curzon Group, and Depot.

Julie's Bicycle is a London-based charity devoted to the arts as well as to culture that tries to embed environmental sustainabili-

ty in company practices. Their core business strategy is integrating sustainability in a company's values. They worked closely with the Curzon Group, whose sustainability approach includes environmental policy, energy use, procurement, staff roles and responsibilities, staff training and mentorship, audience communications, and events/programming.

Depot of East Sussex created a cinema that employs sustainable practices in all areas of its operation. The measures it has taken range from using a Ground Source Heat Pump (GSHP) to procurement and community engagement. Depot also has a living rooftop with a large variety of plants as well as bats' and birds' nests.

The Manchester-based company HOME required its employees to take a mandatory carbon-literacy training course. At HOME, which is working with the Manchester Arts Sustainability Team (MAST), sustainability is given the same importance as health and safety. Some of its staff members were trained as bee-keepers who tend to the apiaries that are housed on its roof.

These venues have demonstrated a clear commitment to sustainable practices. Areas for engagement and improvement include:

- Cinema development – using sustainable materials and approaches for heating, lighting, projection systems, screens, etc;



SUSTAINABILITY BEYOND PRODUCTION

- Energy – reducing energy consumption and engaging with green energy providers;
- Procurement – reviewing brands and favoring local suppliers when possible; investigating the supply chain, and making feasible changes by taking the purchasing power of the customer into consideration;
- Operations – including waste management, monitoring waste generation and taking measures to reduce it by avoiding single-use soft-drink containers and by working with suppliers to reduce packaging;
- Printing – reducing all office printing to only essential items; reducing and monitoring all advertising materials and publications;
- Engaging with the audience – advocating climate-change knowledge and awareness and ensuring audiences are aware of this engagement;
- Engaging with neighbors – increases the chances of finding nearby residents who would take responsibility for waste collection in certain designated areas;
- Environmental Policy – implementing a company-wide environmental policy; distributing and seeking full employee engagement.

Film London will develop guidelines for best practices to be shared across the Green Screen partnership. Future plans will be guided by: embedding the United Nation’s Sustainable Development Goals (SDGs) in the cinema industry; learning how to incorporate a social and environmental responsibility within company ethos; and monitoring the results of all these areas.



Photo: Carlotta Luke

The Depot cinema in Leves is powered by renewables

FLANDERS AUDIOVISUAL FUND

The VAF brought cinema and festival representatives together at a screeners’ breakfast to consider CO₂ impact at the exhibition level. Besides treating energy-efficiency related topics such as heating, insulation, and waste management, it adopted the SDGs as an inspirational directive to cover socially-oriented topics such as education, buying local products, and offering screening opportunities to young filmmakers. Another issue that was discussed is the social role cinemas and festivals play as meeting places where people may debate current issues as well as take part in cultural life. The VAF plans to start a learning network that involves cinemas and festivals in 2020.



Ciclo Cinema in South Tyrol

Photo: IDM

IDM FILM FUND & COMMISSION

CicloCinema is a film-culture project that uses ten bicycles to operate a pedal-driven cinema. A team of young people from Trentino-Alto Adige tours the region on bicycle for a week, during which time it stops at various squares, parks, and sites in order to spread the word about sustainable cinema and to raise awareness of other sustainable projects that are now being undertaken in society at large.

The IDM Film Fund & Commission is a partner in this project, which brings not only films to the people but also raises public awareness of sustainable issues.



LOWER AUSTRIAN FILM & CINEMA CULTURE / LAFC

The Austrian Diagonale Film Festival, which has been a certified green event for several years, is partnering with the Lower Austrian Film & Cinema Culture / LAFC. Starting in 2020, it will begin including Green Filmmaking in its Industry Program.

MALLORCA FILM COMMISSION & FUND

Since the reopening of the CineCitat arthouse theatre in Palma de Mallorca by an association of cinemagoers in 2012, this movie theater has been powered by renewables. Located in the Palma de Mallorca city center, its four screening rooms have a combined total of 560 seats, which attract 70,000 cinemagoers yearly.

The Atlántida Film Festival, which takes place in Palma, is planning to institute green measures in its 2020 edition.

SARDEGNA FILM COMMISSION FOUNDATION

The Sardegna Film Commission Foundation launched a compensation plan that not only protects the island's flora and fauna but also raises public awareness of the need for environmental protection. The "Save Sardinian Seeds" project is devoted to rescuing the seeds of plants native to the island that are now disappearing. The sowing of these seeds is coordinated with the production of animated short films that present these visually striking rescued plants to the public.

In a second phase, a compensation plan will be rolled out to save species throughout the island. This regional action plan involves schools and libraries, and it will also involve productions that shoot in Sardinia because they will be asked to choose a plant to rescue and thereby create a living legacy.

TRENTINO FILM FUND & COMMISSION

In 2019, MIA (Mercato Internazionale dell'Audiovisivo) in Rome initiated a partnership with the Trentino Film Fund & Commission in order to obtain certification as a sustainable event through its compliance with the ISO 20121 certification, which considers "management" to be a fundamental element.

Over the past few years, the Trentino FFC has gained a great deal of expertise in the certification of sustainable film productions thanks to its *Green Film* rating system. Collaborating on the certification of an international event which is attended by thousands of film professionals allows it to extend its set-tested green approaches to other significant areas of the film industry.

This joint effort has a twofold intent: to make event management more sustainable; and to raise public and professional awareness of the participants support of sustainability.



Photo: Trentino Film Fund & Commission

Drinking fountains connected to public water supply network at MIA in Rome



FUTURE ACTIONS

FILMFÖRDERUNG HAMBURG SCHLESWIG-HOLSTEIN

Starting in 2020, all events organized by the FFHS will follow environmentally friendly standards. The green policy will affect the selection of event locations, access to public transportation, and green catering. It will also ban the use of plastic products. Furthermore, the FFHS will organize location tours with organic and regional food as well as a cross-border eco tour to environmentally friendly locations. The tours will also pay visits to suppliers, including those in neighboring countries such as Denmark.

FILM I SKÅNE

Based on results from the *Systrar* case study as well as from other studies, a set of proposed criteria was prepared by consultants for Film i Skåne in order to evaluate the environmental plans that accompany new film production applications. Film i Skåne is considering this suggestion, but the future model is yet to be determined.

This Sustainable Film Production Program document serves as:

- 1) a guide for greener film production in Southern Sweden;
- 2) an environmental plan template; and
- 3) an evaluation form for applicants to Film i Skåne. This is an optional add-on to the standard film commission application for applicants who wish to receive bonus funding for making their film productions more sustainable.

Roles and responsibilities for each production

- a. Film i Skåne – the owner and funding provider for the Sustainable Film Production Program.
- b. Applicant – the production team that applies for funding from the Sustainable Film Production Program should designate an Environmental Officer for its production.
- c. Environmental Officer – represents the Applicant's production team and is responsible for overseeing the implementation, monitoring, and evaluation of the environmental plan.
- d. Environmental Consultant – responsible for reviewing, supporting, monitoring (e.g., conducting audits), and evaluating the Applicant's environmental plan across multiple stages of film production. This role will be assumed by Film i Skåne staff in the future after it has gained sufficient experience in implementing the program.



The Swedish mini-series Systrar 1968, a historical drama

Steps for each production

1. Application submission – The Applicant completes the Sustainable Film Production Program application (by allocating points) and provides supplementary information and documents, which together serve as the environmental plan for the production. This should be submitted as early as possible in the pre-production stage.
2. Evaluation – An environmental consultant reviews the plan to assess the feasibility of the planned actions and prepares feedback.
3. Discussion – Film i Skåne, the Applicant, the Environmental Officer, and the Environmental Consultant meet to discuss and exchange feedback. They finalize the actions to be undertaken in the environmental plan and they agree on a plan to monitor and record progress and results.
4. Implementation – The Applicant proceeds with film production according to the environmental plan. The Environmental Consultant may visit the set and locations to monitor progress and results.
5. Evaluation – At the end of the production, the Environmental Officer and the Environmental Consultant evaluate the environmental plan to determine the extent to which the goals set forth in the plan were actually achieved.
6. Reflection – Film i Skåne, the Applicant, the Environmental Officer, and the Environmental Consultant meet to discuss and exchange feedback and to reflect on possible future improvements.



FUTURE ACTIONS

7. Award of funding – Based on its evaluation and further considerations, Film i Skåne will decide how funding will be awarded to the Applicant (see below for suggestions on funding plans).

Suggestions for funding plans

There are different options for awarding funding at the end of a production, which depend on feasibility, practical aspects, and how strictly Film i Skåne wishes to interpret the Sustainable Film Production Program. Below are two potential options for funding plans.

Option 1: To provide 100 % of funding for implementing the plan if a certain percentage of total possible points has been scored (e.g., 75 %).

Option 2: To provide a percentage of the total funding based on the final number of points scored by the project. This funding award can be distributed across different levels. For example:

Level	Number of points achieved	Funding awarded (%)
Gold	Over 85 %	100 %
Silver	70 % to 84 %	75 %
Bronze	55 % to 70 %	50 %

LOWER AUSTRIAN FILM & CINEMA CULTURE / LAFC

Thanks to the Lower Austrian Film & Cinema Culture / LAFC's initiative, the St. Pölten University of Applied Sciences will become the first educational institution in Austria to offer courses on green film production as followed by the Fimmacademy Vienna.

MALLORCA FILM COMMISSION & FUND

The Mallorca Film Commission & Fund is working on a green approach to film production. It will structure, by way of incorporating the previous experience of other territories, a series of measures in its production guide.

The institution of green measures will become part of the local incentive program, which will favor participating producers by providing them with expedited application processing and reduced fees for shooting permits in protected natural areas.

Together with the Balearic Environmental Ministry and the Costal Authority, the MFC is preparing a program on the sustainable management of film production in environmentally-protected areas.

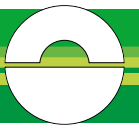
This program will be published both as a User's Guide and as an App, both of which will geo-locate all sensitive areas with extensive information about how to avoid harming the ecological system, including the flora and fauna.

The Guide and App will be available free of charge to both local and international producers that are shooting on the island, and it will make it easy for them to obtain filming permits; provided, however, that they adhere to the Guide's procedures.



Photo: Courtesy of Mallorca Film Commission

Mirador de ses Animes, Mallorca



GREEN GAME CHANGERS

Green film production is getting a real boost. Inspired by various approaches undertaken by CineRegio Green members, a growing number of regional film funds have taken action to produce films in a more environmentally-friendly manner. As this Report indicates, film funds are working on green policy and strategies, training, tools, and regulations as well as incentives to motivate film productions to implement best practices. A real roll out of green production can only take place once the required measures are line items in the budget.

For that reason, CineRegio's *Manifesto for Sustainable Filming* is an important step for film funds to prove their commitment to accepting additional costs in the production budget for environmentally-friendly film production as eligible for funding. The next step is to collaborate closely to develop an eco-friendly infrastructure for the entire film production and exploitation chain.

For example, a carbon calculator is needed that can be used for international co-productions, so that the environmental impact of different productions may be compared by carbon emissions that have been generated. As Film I Skane pointed out in a case study in which environmental criteria were applied

on a production, different carbon calculators show different results for the same production.

Changing the game towards sustainability also means adjusting policy and strategies. As the premiere film fund in Germany, the Filmförderung Hamburg Schleswig-Holstein, starting in April 2020, is going to require that applicants from majority-German film productions shot in Germany commit themselves to complying with criteria required by the Green Filming Badge.



Furthermore, the FFHSH will require compliance with minimum ecological standards in film distribution, which will also become a fixed condition in the application process. No matter whether one is addressing production or distribution, either theatrical release or streaming, the shift towards sustainability always starts with best practices: energy efficiency; the use of renewables; and waste management. Clean power, smart innovations, creative networking, and collaboration in the use of green game changers are needed to make a difference so that the Green Deal, which the European Commission has set as a goal, will become a reality throughout Europe.

Birgit Heidsiek
Editor

Birgit Heidsiek holds a Political Science degree and is a film/media journalist whose career has spanned more than thirty years.

She is also the Publisher and Editor-in-Chief of *Green Film Shooting Magazine* as well as of its sister website www.greenfilmshooting.net, established in 2012 and both of which are devoted to sustainability in film and media. With the European Centre for Sustainability in the Media World, she organizes events, panel discussions, workshops, and lectures throughout Europe.

Birgit is also the author of *The Green Cinema Handbook* (German), published by the German Federal Film Fund (FFA). As the FFA Consultant for Green Cinema, she operates the website www.grüneskino.de and she advises exhibitors on the sustainable operation of movie theaters.

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cine regio

European network of regional film funds

CINEREGIO GREEN MEMBERS

1  **Canary Islands Film, Spain**
www.canaryislandsfilm.com

2  **Filmförderung Hamburg**
Schleswig-Holstein
www.ffhsh.de

3  **Film i Skåne, Sweden**
part of business region skåne
<https://filmiskane.se>

4  **Film i Väst, Sweden**
www.filmvast.se

5  **Film London, UK**
www.filmlondon.org.uk

6  **Film Paris Region/ Ile-de-France, France**
www.idf-film.com

7  **Flanders Audiovisual Fund (VAF), Belgium**
www.vaf.be

8  **IDM Film Fund & Commission, Italy**
www.film.idm-suedtirol.com/en

9  **Lower Austrian Film Fund & Commission, Austria**
www.lafc.at

10  **Mallorca Film Commission & Fund, Spain**
<http://mallorcafilmcommission.net>

11  **MFG**
BADEN-WÜRTTEMBERG
MFG Baden-Württemberg, Germany, www.mfg.de

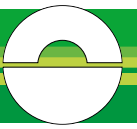
12  **Sardegna Film Foundation, Italy**
www.sardegnafilmcommission.it/en

13  **Screen Brussels, Belgium**
<https://screen.brussels/en>

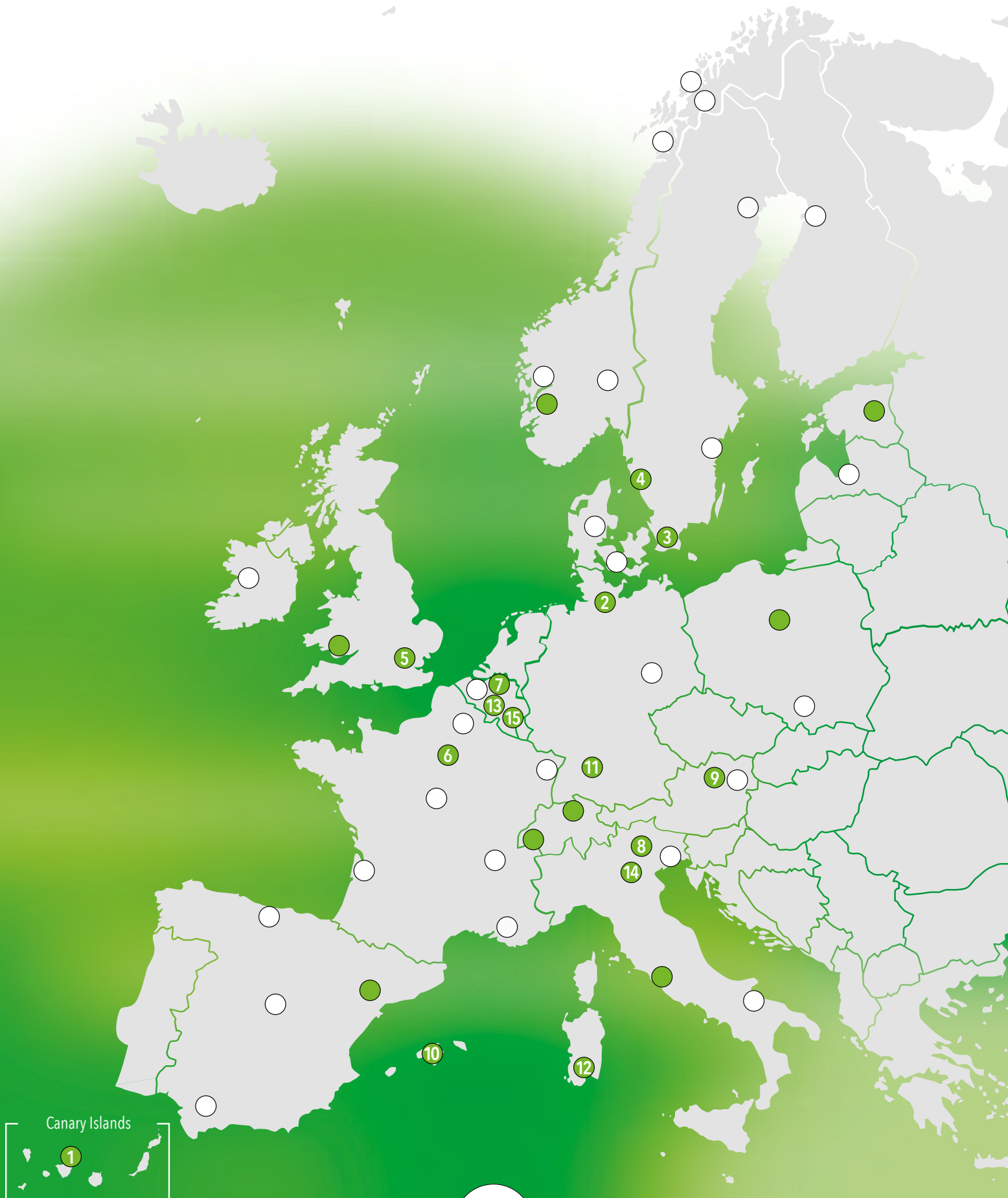
14  **Trentino Film Fund & Commission, Italy**
www.trentinofilmcommission.it/en

15  **Wallimage, Belgium**
www.wallimage.be/en

 **Green Screen**
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