



ecoPROD

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ECO-PRODUCTION GUIDE
FOR SUSTAINABLE FILM AND TV PRODUCTION
|||||

Ecoprod partners

ADEME



Agence de l'Environnement
et de la Maîtrise de l'Energie



centre national
du cinéma et de
l'image animée



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RÉPUBLIQUE FRANÇAISE



Editorial

Since 2009, Ecoprod's partners have been developing tools to reduce the environmental footprint of film and TV production in France. A carbon calculator, fact sheets and testimonies are available free of charge in the www.ecoprod.com, resource centre. They are intended for the growing number of professionals who aim to integrate ecological criteria in their activity and reduce the use of natural resources.

This second Eco-production Guidelines takes into account new best practices and recommendations as implemented by film crews. It has been designed as a logbook that you can use to share your experiences with us after your project has wrapped up. The Ecoprod team is working to change habits step by step! Since 2013, Ecoprod has also initiated a process to help manage sets at the end of their lifecycle, supported by institutional partners as well as major players in the Events and Live Entertainment industries.

Ecoprod developed its *Eco-production Charter*, in 2014 for audiovisual companies of all sizes to encourage their service providers, clients and financial backers be part of a virtuous circle.

You'll find the Ecoprod's partners involved in a variety of festive events, working alongside French and international stakeholders who share the same concerns for the environment and the film and TV industry.

If you wish to share your best practices, tricks and tips that make your production projects more environmentally friendly, let us know at contact@ecoprod.com.

The Ecoprod collective

WWW.[ecoprod.com](http://www.ecoprod.com)

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HOW TO USE THE GUIDE

Key principles

This guide was designed as a roadmap to help you make eco-friendly choices throughout your audiovisual project. Estimating your carbon footprint with Carbon'Clap is an excellent way to determine your priorities (see page 7). This will give you a snapshot of your carbon impact ahead of your project, help you choose the actions to take and follow-up on their progress. After identifying your three main CO₂ emissions sources, please refer to the checklist of suggested actions. Each action deals with a specific part of the production process and some of them will be more or less relevant depending on the type of your current production. However, the actions to implement are often part of a cross-cutting theme (energy, waste management, etc.) marked with one of the icons below. Keep track of all the "planned" actions before filming, then all "completed" actions implemented during your project.

Your feedback is important so we can share experiences with other industry stakeholders.

- ✱ Diversity of real life situations, Tight deadlines and budgets, unprepared partners, stuck in old routines... you feel discouraged by all the items on the checklists? Don't despair! We know there's a long way to go. Simply start by **choosing an initial focus** (energy or waste management, for example) and monitor your progress.
- ✱ Commit to the Ecoprod approach as early as possible with your broadcaster, financial backers, production crew, service providers, public policymakers and local institutions.
- ✱ Use the approach as a challenge for the crew and to drive external communication.
- ✱ Designate an eco-supervisor to coordinate actions and answer/fill in the guide.
- ✱ **Remember the 3Rs:**
Reduce, Reuse, Recycle (and when you throw something away, sort it properly!)
- ✱ **Share your experience:**
This logbook, once completed, is a gold mine of information for other eco-producers! Share yours in digital format with the Ecoprod team at contact@ecoprod.com.



Carbon offsetting is another way to take your eco-production efforts to the next level. Find out more about our partner **EcoAct**.

ACTION ICONS



CARBON'CLAP
CALCULATING YOUR CARBON FOOTPRINT



HOW TO CALCULATE YOUR PRODUCTION'S CARBON FOOTPRINT

CALCULATE YOUR CARBON FOOTPRINT BEFORE STARTING TO FILM

To start your project off on the right foot, get an initial snapshot of your CO₂ emissions using the free Carbon'Clap tool at Ecoprod.com. This easy-to-use software helps you save, edit, copy and export all your assessments and will keep them on your Carbon'Clap account.

THE COMMON THREAD OF ECO-FRIENDLY PRODUCTION

The estimated CO₂ impact will be the common thread throughout the production process: with the highest generating sources of greenhouse gases (GHGs) identified, you shall be able to create a relevant action plan. A second assessment at the end of filming will show the effectiveness of adopted measures.

HOW TO USE CARBON' CLAP

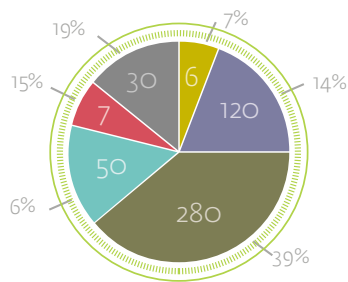
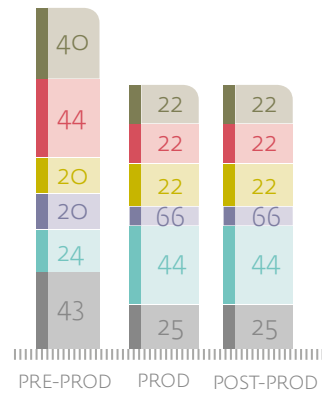
- Create your free account on www.ecoprod.com
- Gather the key data about your production
- Fill in the fields directly on the website
- The software will do the rest!
- Get all your carbon assessments on your account, edit and finalise them, export to a PDF file and more.

AVAILABLE ON WWW.ECOPROD.COM :

- Carbon'Clap user guide
- List of data required for the assessment
- Guide to methods and values used by the software

Simulation of the Results windows in Carbon' Clap

(IN MTCO₂E)



- ◆ TRAVEL
- ◆ FREIGHT
- ◆ ENERGY
- ◆ ACCOMODATION & CATERING
- ◆ EQUIPMENT
- ◆ SET MATERIALS

→ These figures are fictional and given only as an example

A few figures AS A GUIDE

Average CO₂ emissions, calculated using Carbon' Clap by production type (in MtCO₂e)



→ AN HOUR OF TV (STREAMING)



→ ANIMATED SERIES (39X7MIN)



→ NEWS PROGRAMME (BASIC)



→ TV SERIES EPISODE FILMED IN PARIS



→ TV SHOWED FILMED IN FRANCE



→ ORGANISED AND BROADCAST EVENT (INTERNATIONAL)



→ FEATURE FILM, SHOT IN MULTIPLE LOCATIONS

Key figures FOR YOUR ASSESSMENT

Enter these key figures to see your carbon footprint before production starts

TOTAL RESULT of your provisional assessment *

	MtCO ₂ e	%
PRE-PRODUCTION		
PRODUCTION		
POST-PRODUCTION		

MOST SIGNIFICANT SOURCES :

CO ₂ EQ. in T or KG
CO ₂ EQ. in T or KG
CO ₂ EQ. in T or KG

* Expressed in :

MtCO₂e Metric tons of carbon dioxide equivalent ou KgCO₂e Kilograms of carbon dioxide equivalent

CHECK-LIST BY DEPARTMENT

ALSO REFER TO THE COMPLETE FACT SHEETS ON THE ECOPROD WEBSITE

PRODUCTION PROJECT NAME →

NAME OF PRODUCTION COMPANY →

ECO-PRODUCTION CONTACT →

TYPE OF PRODUCTION → Video recording News

Documentary TV streaming TV show

Feature film Advert Animated film

PROGRAMME DURATION *in minutes* →

MAIN FILMING LOCATION →

TOTAL PROVISIONAL CARBON FOOTPRINT →

THREE MAIN SOURCES OF POLLUTION *(by quantity)* →



Production

IN THE PRODUCTION OFFICE	ESTIMATED	ACTUAL	COMMENTS & TIPS
Display Ecoprod posters and labels in offices and on set to raise awareness about turning off lights and equipment as well as recycling			→ To download posters: http://www.ecoprod.com/agir-avec-ecoprod/signaletique/signaletique.html
Use digital documents whenever possible, save paper when distributing scripts and opt for videoconferences instead of travel			
Choose to buy certified paper. For more information, refer to the list provided on the French Environment Agency's (ADEME) website: http://www.ecoresponsabilite.ademe.fr/n/choisir-le-bon-papier/n:296			
When possible, always print in black and white, double-sided and with the eco-setting on			
Choose energy efficient equipment (IT and appliances) and follow ADEME's recommendations			
Reduce air conditioning and heating and opt for a green energy supplier where possible			
Select office supply companies with eco-friendly products			
Limit the use of cleaning products and opt for certified products, such as those with the EU Ecolabel certification			
Organise recycling or disposal of electronic equipment as well as printer cartridges, batteries, paper and packaging			

Find out more about responsible consumption certifications (in French only): <http://www.mescoursespurlaplanete.com/Labels/>



Production *cont.*

DURING FILM	ESTIMATED	ACTUAL	COMMENTS & TIPS
Appoint an Ecoprod supervisor to plan the initiative for the action plan			
Implement signage for the crew			
Involve the production team: add tips on working documents, Ecoprod logo on the film website (if one exists), etc			
Estimate your carbon emissions with the Carbon'Clap tool			
Pre-filming carbon footprint			
Post-filming carbon footprint			
Create an eco-friendly production charter with the main initiatives, distribute it to the crew and leave it on display in strategic locations			→ Sign the Ecoprod Charter, available in the Ecoprod toolkit
Share this information with suppliers and service providers (if possible, choose service providers who have an environmental policy)			

A FEW EXAMPLES OF CERTIFICATIONS TO IDENTIFY COMMITTED SERVICE PROVIDERS



Created by Synpase, this certification is awarded to audiovisual, entertainment and event professionals who have implemented best practices according to in social, economic and environmental criteria spheres.



The LUCIE certification identifies companies committed to sustainable development in the social, economic and environmental spheres.

The BS ISO 20121:2012 Sustainability in Event Management is a British standard developed specifically for the events industry.
<http://www.bsigroup.com/>



Production management → TRANSPORTATION

LOGISTICS	ESTIMATED	ACTUAL	COMMENTS & TIPS
Create a travel plan ahead of filming: identify public transport opportunities/ possibilities and opt for videoconferences, carpooling and electric vehicles			
For non-local crew members, choose accommodation as close to the filming location as possible			
Provide crew with information about the nearest public transport and bike share stops to the filming location			
Organise carpooling between crew members			→ A carpooling table is available in the Ecoprod toolkit
Talk with freight and car hire companies about the energy efficiency of their lorry and vehicle fleet and rent low-emissions or hybrid/electric vehicles. Opt for large-capacity vehicles (minibus, people carriers, etc.) and ensure vehicles are properly maintained.			
Optimise trips and track driven kilometres and used fuel; apply eco-driving principles			→ A kilometre tracking form is available in the Ecoprod toolkit!
Optimise equipment loading and delivery			
Organise security during the night for equipment trucks to remain parked at the filming location and thus avoid useless travel back and forths			
Opt for environmentally friendly transport options and select transport companies engaged in sustainable development (bicycles, skating, public transport for short distances); take trains rather than flights; purchase carbon offsets for long distances			



General production

→ CATERING

CATERING ESTIMATED ACTUAL COMMENTS & TIPS

Choose a supplier committed to sustainable development; otherwise, add this criterion to your invitations to tender (procurement, waste management, packaging reduction)			
Consumables purchases: carefully evaluate your needs to prevent waste			
To curb food waste, share leftover food with crew members or donate to a local association			
Do not use disposable dishes and cutlery; use large, reusable containers that can be customised (e.g., water bottles) to limit packaging; opt for reusable bags			
Ask your catering provider for local and seasonal fruits and vegetables...			
Opt for organic and/or fair trade products when possible			
Set up sorting bins and post/display waste recycling signs			<i>Signage available in the Ecoprod toolkit!</i>

THE ECOPROD TOOLKIT INCLUDES :



→ Documents can be downloaded from www.ecoprod.com



Studio & set

STUDIO & SET ESTIMATED ACTUAL COMMENTS & TIPS

Eco-designed sets: from design and setup, plan the dismantling, sorting and recycling of the set			
Source local labour and materials when possible			
Use recycled and/or certified materials, avoid toxic products and opt for plant-based materials			
Ask the studio service provider to supply waste sorting bins (packaging), containers for paint water disposal, and a skip for wood			
Ensure that leftover materials are collected and recycled			
Inform team about the sorting policy: post signs on sorting bin			
Select what can be reused for another production project or sold to crews, associations or local organisations			
Rent or reuse materials where possible instead of buying and building from scratch			
Use sustainably harvested wood (FSC - or PEFC - certified) with little or no formaldehyde (a carcinogenic substance)			

DO YOU KNOW THE "RÉSERVE DES ARTS" IN PARIS ?

This is a platform for the recovery and reuse of unwanted materials from businesses to supply creative professionals.
www.lareservedesarts.org

DO YOU KNOW "ARTSTOCK" IN THE PACA REGION ?

This is an organisation that refurbishes sets, costumes, materials and accessories.
www.artstock.fr



Lighting & energy

LUMIÈRE & ÉNERGIE ESTIMATED ACTUAL COMMENTS & TIPS

Ask the studio about its environmental practices. Raising awareness (also) happens through the customer/supplier relationship.			
Identify ways to use as little artificial light as possible for outdoor filming (opt for reflectors and natural light)			
Plan ahead to shoot during the day and choose locations where you can connect to public utilities			
Use LEDs and other energy efficient lamps (Kino Flo®, fluorescent) whenever possible			→ See our "Lighting" working group's study at www.ecoprod.com
Replace tungsten and incandescent lightbulbs when filming (opt for fluorescent, HID lamps, etc.)			
Have a dedicated crew member ensure lamps and equipment are turned off when not in use			
Recycle used lightbulbs at designated disposal sites			→ Find a disposal site (in France only) at http://www.reylum.com/geolocalisation/
Polystyrene reflectors are recyclable (even when painted) at 200 disposal sites in France → Find out more at www.ecopse.fr			

Over its lifetime, a LED lightbulb consumes half as much energy as a fluorescent bulb and has half its environmental impact. LEDs cannot be recycled but at least, only rare metals have to be disposed of and no toxic substances are released. The greatest moment of impact is during use, making LED the most ecological option. STEPHANE KERLOCK, EXPERT LED



Lighting & energy

TYPE OF BULB & LIFETIME	LUMINOUS EFFICIENCY		BENEFITS	DRAWBACKS	ENVIRONMENTAL ASPECTS
	(LUMEN/WATT)	CRI			
Tungsten/halogen 50 to 300 hrs	max. 25	100	Gradient possible of 0 to 100% on dimmer board. Lights up instantly. Easy maintenance.	Generates significant heat. Fragile bulb.	High energy consumption. Generates significant heat, which requires air conditioning to control.
Fluorescent tube 1,000 to 1,500 hrs	avg. 45 (Kino Flo®)	95	Low consumption for good performance. Gradient possible. Available in 3200 K or 5600 K depending on tube.	Low-range power: must be in close proximity. Fragile bulb.	Low energy consumption. Must be recycled (contains mercury).
HMI / metal-halide 500 to 1,000 hrs	max. 95	95	High power and low consumption. Very good performance.	Takes time to reach full power. Costly as it uses sophisticated technology.	Low energy consumption. Must be recycled (contains mercury).
LED 20 to 50,000 hrs	avg 50	70 to 80	Large choice of colours. No need for gels. Gradient possible.	Colorimetric issues. CRI is unsuitable for faces. Lacks coverage in the middle of the colour spectrum. Costly technology.	Very low energy consumption. Generates little heat (some at the base). Must be recycled (with electronics).



Equipment

EQUIPMENT	ESTIMATED	ACTUAL	COMMENTS & TIPS
💡 Rent high-efficiency digital equipment (cameras, hard drives, sound equipment, etc.) from local providers whenever possible!			
💡 Raise awareness among crew on how to save energy (lights, equipment)			→ Awareness posters available on the Ecoprod website
♻️ Choose rechargeable batteries and recycle single-use batteries			
💡 Use generators only when absolutely necessary; calculate the exact power required and opt for energy efficient generators			
♻️ Limit waste and overconsumption of consumables (gaffer tape, grips, straps, ropes, etc.) and reuse/recycle when possible			
🛒 For special effects, use the least harmful products possible and take the necessary precautions to limit damage to the environment and human health			
♻️ Donate obsolete equipment or take it to an appropriate disposal organisation			

Green generators are starting to be available on the market. Why not try one?



Costumes & make-up

COSTUMES & MAKE-UP	ESTIMATED	ACTUAL	COMMENTS & TIPS
🛒 Choose certified products			
🛒 Limit the use of consumable (wipes, sprays, individual packets, etc.); opt for recycled cotton, buy in bulk and recycle packaging			
🛒 Reuse, borrow, rent and buy second-hand clothing			
🛒 Establish sustainable development purchasing and manufacturing criteria with regards to fabric components, origin and sourcing			
💡 Opt for energy-efficient and eco-friendly care practices (energy-efficient washing machine, certified detergent, low temperatures)			
♻️ When the filming wraps up, keep clothing and accessories for another project, sell them to the crew, second-hand stores or costume rental companies, or donate to charity organisations (Emmaus, Salvation Army etc.); reuse or recycle accessories such as covers, belts and bags.			

ORGANIC COSMETICS CERTIFICATIONS INCLUDE :





Post-prod & non-filming activities

POST-PROD & NON FILMING	ESTIMATED	ACTUAL	COMMENTS & TIPS
Ask the post-production studio about its environmental and energy saving approach (production room, equipment, practices, equipment disposal, green energy)			
Opt for energy efficient and certified equipment (Energy Star, TCO o3)			
Choose virtual broadcasting techniques and digital archiving methods to limit energy consumption			
Isolate machines that generate heat in air conditioned rooms.			
Always turnoff electric equipment when not in use (if doing so does not affect operations)			
Organise recycling for waste electrical and electronic equipment (WEEE).			

→ GOOD TO KNOW

Since 2005, your professional equipment suppliers must dispose of their products at the end of their lifecycle (→ French decree no. 2005 829 dated 20 July 2005). This task may be delegated to a specialised company. ATF is one such company.



ECO-PRODUCTION REPORT EXAMPLES



Carbon footprint assessment with → JO

ABOUT THE PRODUCTION

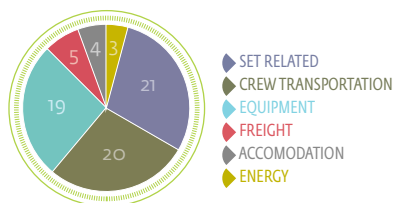
- ☀ **TYPE** → Crime drama
- ☀ **SERIES DURATION** → 8 episodes of 50 minutes
- ☀ **FORMAT** → Digital
- ☀ **FILMING LOCATION** → Paris and Paris metropolitan area
- ☀ **TYPE OF FILMING** → outdoors and sets

KEY FIGURES

The figures below show the environmental impact of this big-budget production, filmed in 2012. The eight episodes required :

- ☀ **88** days of filming around Paris.
- ☀ **32** sets per episode (built in Saint-Ouen, stored in Paris)
- ☀ **17** production vehicles, **6** motorhomes, **28** utility vehicles
- ☀ **12** round trips between Paris / Los Angeles
- ☀ **320** trips between London / Paris (exclusively via Eurostar)
- ☀ **10 000** meals, **1300** hotel stays during film

RESULT → an average of **72 MtCO₂e** per episode, i.e., half what would have been generated without the adoption of specific eco-friendly actions.



"I've always been careful about the ecological impact of our profession and the crews' health. I used my experience while working on Jo. The key is planning: the distance between the filming location and storage, crew travel, air quality in set building areas, used paint management, using digital documents and saving paper using the OutlookMovie app. You can only get good results by incorporating these considerations very early on and communicating them with the entire production crew." **ANDRÉ BOUVARD**, PRODUCTION MANAGER

GOOD PRACTICES ADOPTED

- ☀ **TRAVEL** → trips between London and Paris via Eurostar, location scouting by motorcycle, catering and set storage near filming locations, no blocking of local parking, limited use of motorhomes
- ☀ **ENERGY** → use of temporary grid connections for 70% of the filming time
- ☀ **WASTE MANAGEMENT** → reduction, sorting and disposal of catering waste by the city of Paris
- ☀ **PAPER** → use of digital documents (layouts, schedules, etc.) via OutlookMovie
- ☀ **FURNISHINGS** → resale of office furnishings after production was completed
- ☀ **HEALTH AND ENVIRONMENT** → installation of a central ventilation system in set building areas
- ☀ **FILMING** → aerial views shot using an ultra-lightweight drone with an electric and thermal motor instead of a helicopter

ECO-PRODUCTION TESTIMONIALS

“The CNC is fully committed to Ecoprod. Being environmentally responsible is not only a major societal concern but is an opportunity for our entire industry to commit to an efficient approach that can streamline production budgets.”

Frédérique BREDIN, President of the Centre National du Cinéma et de l'Image Animée

“Since 2011, the production industry has been committed to reducing CO2 emissions while filming its television films at its pilot site in Marseille. Funding from the PACA region in 2012 made it possible to implement practical and novel solutions. In 2014, in cooperation with the delegate producer Telfrance Série, France Télévisions will focus its efforts on "Plus Belle la Vie".”

Philippe DESGUE, France Télévisions production subsidiary Olivier ROELENS, France Télévisions production subsidiary for Plus Belle la Vie

“Thanks to Ecoprod, we have been able to join forces with major industry stakeholders. This has made it possible to quickly raise awareness about challenges related to our professions and which affect our health, jobs and economic development. Asking questions and carrying out diagnostics is all well and good, but coming up with solutions is better. Ecoprod does that by offering tools and methods. IN PACA, this initiative was rounded off by the AGIR financial incentive programme to adopt more environmentally friendly methods.”

Chantal FISCHER, Head of the Cinema and Audiovisual Department for the PACA Region.

“The TF1 group is aware of its influential role as a client in the media industry. Our responsible procurement policy, in place for several years, takes into account its partners' and suppliers' in CSR policy efforts.”

Jean-Michel GRAS, Director of Procurement, TF1 group

“The set department is sophisticated in its artistic approach and radical in how it executes its plans. This is good when it comes to adjusting to new environmentally friendly practices but can be challenging when deadlines are short. Assembly, cutting out ecological materials by highly qualified set builders, more efficient logistics flows by experienced stage managers, local set storage, efforts by suppliers to provide products that are up to standards and sharing waste skips are all basic tools that can be standardised to help set designers be more eco-conscious.”

William ABELLO, Head Set Designer for films and events

“There is a sense of magic and an ephemeral quality in what we do... along with a lot of waste. Of course we can do better! If we could do our jobs just as well, with just as much passion, but more in step with our citizen consciousness, we're on board!”

François PERILLAT, Director of Production

ecoproduct

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