

VAF  
VLAAMS  
AUDIOVISUEEL  
FONDS



# CARROTS AND FILMS

GREEN SCREEN CURRICULUM  
SUSTAINABLE FILM SECTOR



## Introduction

The Flanders Audiovisual Fund (*Vlaams Audiovisueel Fonds* - VAF) is spearheading a sustainable approach to filmmaking in Europe. The VAF encourages players in the audiovisual sector to make a commitment to sustainability in a variety of areas. We focus not only on the impact during the production phase, but on the scenario and screening as well. Our concept of sustainability is based on the 17 Sustainable Development Goals of the United Nations.

This guide is part of a training package for film students and is designed as an aid for instructors. Using the standard PowerPoint presentation and this guide, you will be able to provide your own information session on sustainable filmmaking.

This presentation outlines the environmental issues at stake and explores the definition of sustainability on one hand, while also seeking to identify concrete steps that can be taken in the audiovisual sector as a whole. Aspects such as scenarios, production and screening will be considered in-depth.

Throughout this guide you will also find links to extra information, additional questions and assignments.

This guide forms part of the project for sustainability at postsecondary film schools and has been made possible through funding from Green Screen (funded by Interreg Europe).

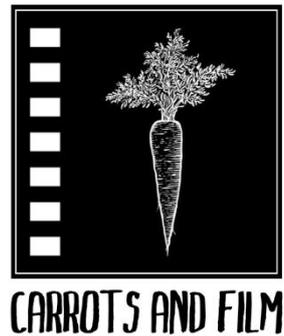
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## 1. Welcome

Welcome to this information session on sustainability and the audiovisual sector. Our goal today is simple: to give you a clear idea of the impact that each of us has. Not only as private citizens, but also as professionals working in the audiovisual sector. We will explore the issue of sustainability through concrete examples, as well as highlighting a number of the challenges that come into play and the definition of sustainability. We will then look at specific domains, based on examples from the film and media sector.



This information session is based on the work of the Flanders Audiovisual Fund (VAF) in the area of sustainability as well as projects that have been overseen by the VAF. This package was developed within the framework of Green Screen, an Interreg Europe funded project (<https://www.interregeurope.eu/greenscreen/>).

Today's goal is to immerse you in this highly topical issue. Hopefully, afterwards, you will all know what the connection is between rice cakes and the film sector.

## 2. F%CK

Many film professionals are not aware of their impact when it comes to sustainability. 'F%CK' is therefore a common reaction. Not only in the sense of 'Do I have an influence, as a professional in the audiovisual sector?', but also because of the major positive role that you can play. As a student, a writer, a creator or an exhibitor.

We sincerely hope that you will absorb the information you hear and actually use it in the future. Think of it as gaining an awareness, a package with basic information that you can tap into as needed.



## 3. GLOBAL CHALLENGES

The media is constantly raising the alarm about all sorts of problems, big and small. We hear about geopolitical relations, banking crises, ice caps, natural disasters, ozone layers, migration, disappearing biodiversity... Each one of these topics could fill a course of several days, but instead of discussing them in detail one by one, we will pick out a few that are relevant to the audiovisual sector.



#### 4. LUCIA

I'd like to tell you about a special girl, and her even more special dad. Lucia Stouthuysen was born in 2010. She could be any kid in any average family. What makes Lucia so special? Her dad Peter.

Peter works as a waste and materials expert (including sustainable materials management) and has a great passion for data visualization. By the way, that passion is so

great that he has made it his profession. When Lucia was born, Peter had an inspired idea. As a gift, he made an infographic. Not just any old infographic, it was about the course of his daughter's life.

Find out more? <https://visual.ly/designers/peter-stouthuysen>



#### 5. WHAT REMAINS?

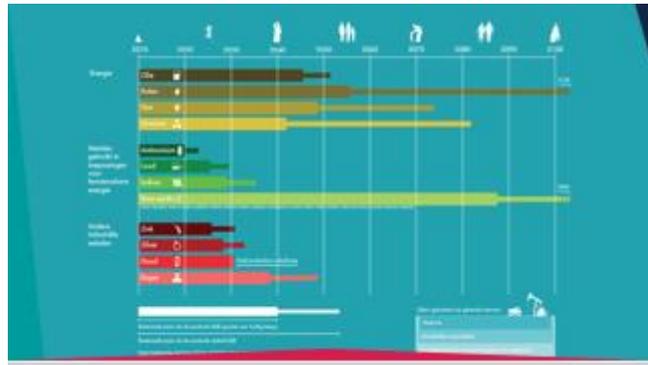
The infographic shows Lucia's path through life. At the top left you can see her birth. Her lifeline runs from left to right, as a child, as a teenager, a newlywed, with children and grandchildren.

Below are 3 large blocks: energy sources, materials needed for the production of renewable energy (batteries, solar panels ...) and materials for industrial applications. As you can see, those resources are not

inexhaustible. Somewhere around 2045 Lucia will witness the last drop of fuel that is available from a gas station. We will probably all be aware of that moment when it happens.

We will see similar shortages with regard to the raw materials for solar panels and batteries, for example, but also of the chemicals that are crucial for manufacturing our computers, mobile phones and movie cameras.

This chart is food for thought. How do we manage our raw materials today? And what are the consequences of our behaviour for Lucia and future generations? It can make us think about the role that each of us has to play, both at home and in the workplace. What choices do we make when we purchase things and throw them away? And what is the impact of this on all of us?

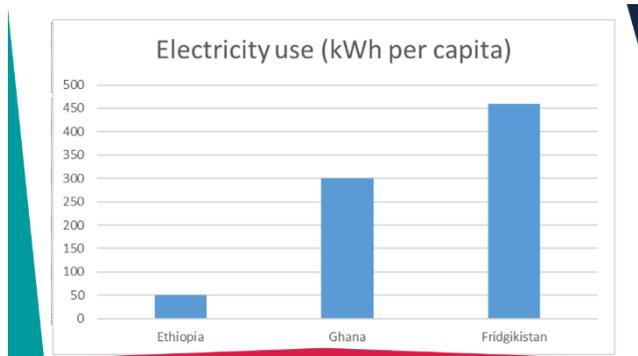


## 6. ENERGY CONSUMPTION 1

Time for a different topic. Energy. This chart shows the average annual electricity consumption per inhabitant of a handful of African countries. The power consumption is expressed on the vertical axis, in kilowatt-hours per inhabitant. The different countries are shown on the horizontal axis.

For example, you can see at the bottom left that the average Ethiopian uses around 50 kWh electricity a year.

At the far right you can see how much energy the average refrigerator consumes on an annual basis. The fridge that we all have in our kitchen or film set consumes an average of 450 kWh. Or as many as 9 Ethiopians consume per year. That is some serious food for thought. But we are going to take it a step further.



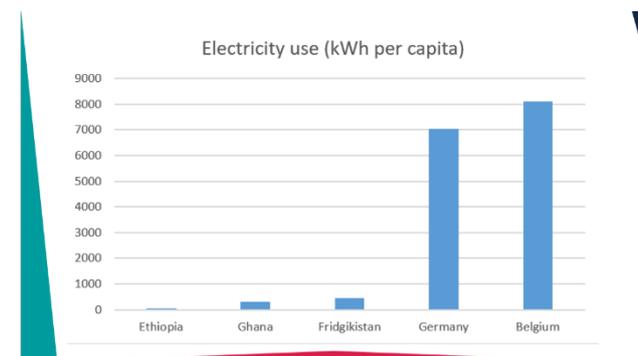
**QUESTION: Do any of you have an idea how our own electricity consumption would compare to this chart?**

## 7. ENERGY CONSUMPTION 2

The same chart. At left, the Ethiopian, towards the right, the fridge. But on the far right is our own annual power consumption. On average, it's about 8000 kWh. Everything that we use day in day out: our refrigerator, our computers, lights, mobile phone, social media, stove, TV, etc. consumes as much as 160 Ethiopians do.

But weren't we talking about film? That's right. The average film set also consumes a whole lot

of power. The average film consumes about 3000 kWh. That's roughly half the annual consumption of a Belgian. This includes the power for lamps, cameras, computers, cooling, servers, special effects, ... Again, food for thought: how do we manage our energy consumption on the set? Which choices are positive; which have a negative impact? This will be discussed in concrete detail later.

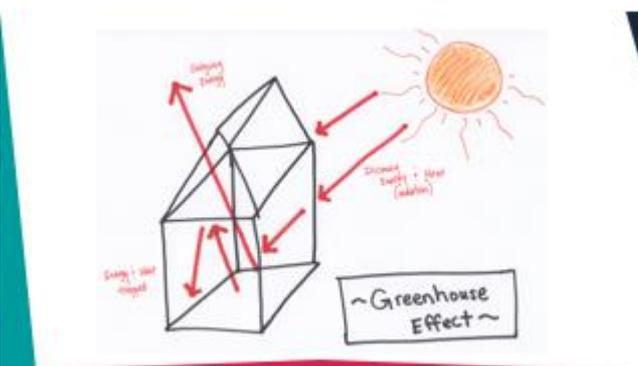


## 8. GREENHOUSE EFFECT

A lot has been written about the greenhouse effect, some of it meaningful, some of it junk.

**QUESTION: Do any of you know how the famous greenhouse effect works?**

The greenhouse effect is an effect just like a glass greenhouse: greenhouse gasses form an insulating layer around our planet. This layer transmits the sun's rays, but traps the heat that is radiated back by the earth. The effect?

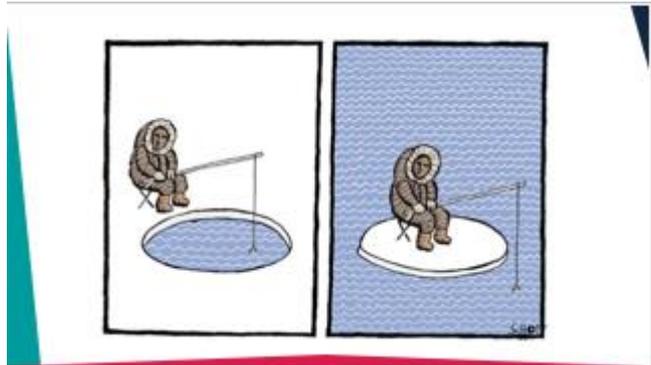


The earth is slowly but surely warming up. There are supporters and opponents of the greenhouse theory. Supporters attribute the climate extremes to the greenhouse effect, while others say that there have always been fluctuations throughout our Earth's evolution.

Donald Trump says it was invented by the Chinese. Climate scientists supply concrete research results and hard data. Among other things, they rely on measurements of greenhouse gases in the polar ice. As you will soon see, however, the sustainability debate is much broader than climate change.

## 9. ICECAPS

Children can draw pictures of the greenhouse effect, but you can also influence society as an artist, for example by using the power of imagination. It may sound crazy, but you all have a potential role to play, from this creative sector, in inspiring and shaping society. Also in terms of sustainability.



## 10. GLACIER

**QUESTION: Do any of you recognise this picture?**

I will put you out of your misery... it's every scientist's fantasy. A few years ago, an expert in satellite images noticed a vertical line on his screen during a routine check. This line could not be explained and it ran straight through the Petermann glacier, somewhere in the Far North.



That scientist, the Belgian Stef Lhermitte, had no immediate explanation for this phenomenon and posted a photo of it on Twitter. That photo was picked up by NASA. And after verification by airplane, it became world news. A crack, in the middle of a glacier, at a place and time it was not in the least expected.

That crack in that glacier is perhaps a scientist's wildest dream and may seem far away from our daily lives. But for animal species who live there, such obstacles are the harsh reality. A reality in which their migration routes are being cut off.

Find out more? <https://www.abc.net.au/news/2017-04-17/nasa-images-show-new-crack-in-greenland-petermann-glacier/8447754>

## 11. ELECTRICAL APPLIANCES

Another continent, another story.

**QUESTION: Do any of you know what this is a picture of?**

This is how electrical appliances, such as refrigerators and TVs, are clandestinely recycled. They are simply set on fire in the hope of recovering the valuable metals and materials such as copper. Materials that we all, including Lucia, as mentioned earlier, desperately need to produce new things.



I don't have to spell it out: this is not good. Neither for the materials, nor for the environment, nor for our health. Is it relevant for us? Think twice when you get rid of appliances. What should you do with them?

**QUESTION: Do any of you have an idea of how you can properly dispose of electrical appliances?**

The correct answer is: dispose of electrical appliances professionally, via the dealer, the Kringwinkel (second-hand shop) or the municipal recycling centre. Don't just put them out on the street!

## 12. RECYCLING

Same situation, different continent. This picture was taken in the recycling department at Coolrec in Liège. This is a high-quality recycling department, where every component and material is disposed of professionally and safely. This is what happens when appliances are disposed of as they should be. Think of Lucia!



More info about electrical appliances:

[www.recupel.be](http://www.recupel.be)

<https://www.dekringwinkel.be/tweedehands-elektro.html>

## 13. PALM OIL

**QUESTION: Does anyone recognise this? Any guesses?**

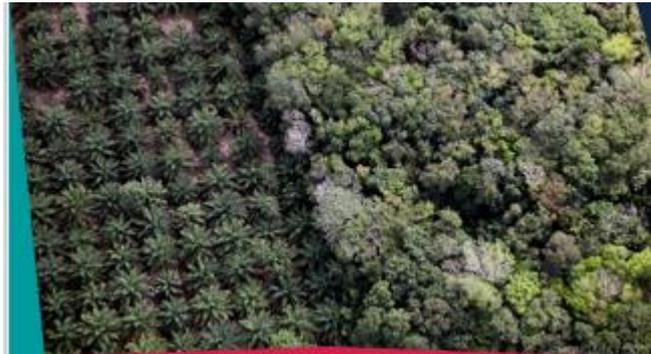
This is the oil palm. We all know the oil from this tree. It is found in just about all the products that we consume every day. But do any of you know the story behind the oil palm?

Find out more? <https://wwf.be/nl/palmolie/>



## 14. HABITAT LOSS

This photo shows the direct impact of palm oil. On the right you see original forest, on the left a palm oil plantation. Forests are cut down for the timber. The original trees disappear and animal species in this forest no longer have a habitat. These areas are often then planted with oil palm. Because that quickly brings in money again.

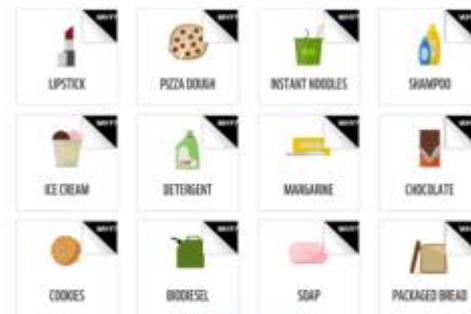


Find out more?

<https://www.facebook.com/uniladmag/videos/289419595029811/UzpfSTewMDAwNjAyNzk2OTkwMDpWSzoyNzQ4ODY4NTU4NDYwNDQ4/>

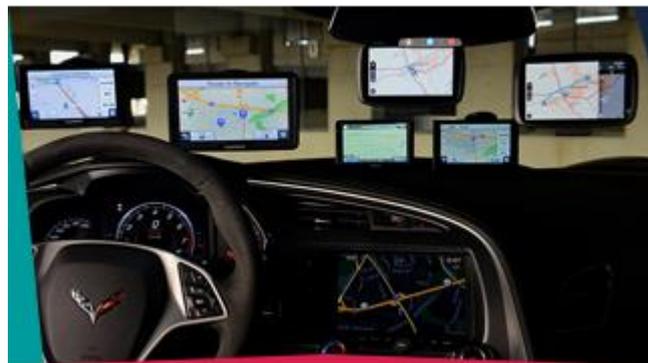
## 15. PALM OIL

We all buy products that contain palm oil. Through your purchasing behaviour here, you are indirectly determining what happens in the South. As you can see in this overview, many everyday products contain palm oil. But you have power, because you hold the purse-strings. By being aware of what you are buying, you can control what you buy as a consumer, both privately and in a professional setting. You can make that choice in terms of waste, but also in terms of packaging (products in bulk) or environmental impact (2nd hand instead of new).



## 16. GPS

We have already covered a wide range of challenges. The question is, of course: as a filmmaker, what can I do about it? People say 'all roads lead to Rome'. Well, it's true. There is no single standard solution. Every film and every situation is different. A number of sustainable principles are universal, but often it is more a matter of customising the approach. In the course of the rest of this presentation, we will discuss a number of possible sustainable choices.



## 17. RICE CAKES

This is perhaps the most important slide of the entire presentation. So listen carefully. It's possible that after this presentation you'll have completely seen the light and will make every choice in your private life intentionally sustainable. That would be fantastic. You'll eat rice cakes or carrots the rest of your life. But be aware that the impact you have in your private life is dozens of times smaller than the impact you will have as a film professional. So it's not



just about sustainable choices at home, but also about sustainable choices in the workplace. Day after day, year after year. In this way you can make a concrete, measurable and relevant difference.

## 18. WHAT IS SUSTAINABILITY?

**QUESTION: Do any of you actually know what we mean when we refer to sustainability?**

Reference is usually made to the Brundtland report. It states that: 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' In short: the story of Lucia! But there's more.

More info:

<https://nl.wikipedia.org/wiki/Duurzaamheid>

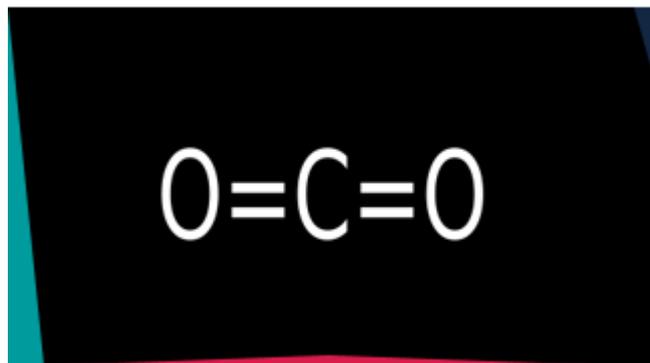
<http://www.un-documents.net/wced-ocf.htm>



## 19. CO<sub>2</sub>

**QUESTION: Does anyone know what this is?**

This is CO<sub>2</sub>. When people talk about sustainability, this is often involved. All kinds of things are said about this molecule. It is one of the various greenhouse gases. The sustainability debate is often reduced to cutting CO<sub>2</sub>. But that's just part of the story. In the film sector it is used to measure the environmental impact. For example, the VAF



asks for projects that receive production support to measure the impact of their production on the basis of a CO<sub>2</sub> calculator. In such a calculator, all choices are converted into their CO<sub>2</sub> equivalent. It is thus possible, for example, to combine different domains.

## 20. SDGs

However, sustainability is much more than just CO<sub>2</sub> savings.

**QUESTION: Who knows what this is? Does anyone recognise this picture? If so: can you explain?**

These are the sustainable development goals of the United Nations. Specialists from all over the world defined 17 sustainable development goals. As you can see, this approach is much broader than the CO<sub>2</sub> debate.



This approach is human and recognisable. Themes such as gender, equality, education, consumption, climate and biodiversity appeal more to the imagination than, say, CO<sub>2</sub>. That is why the VAF has chosen to use these SDGs as a moral compass.

Many actions are easier to categorise via these SDGs. For example, if you donate leftover food from catering to a social project, then you are directly addressing hunger, poverty and consumption.

Look at the SDGs as a source of inspiration. Whether you are organising an activity for your sports club or making choices on the film set.

More info:

<https://www.sdgs.be/nl/sdgs>

<https://www.pulsenetwerk.be/sdg>

## 21. VAF

The VAF has been actively committed to sustainable filmmaking since 2013, placing it among the leaders in Europe. It shares its expertise with stakeholders at home and abroad (via Cineregio and Green Screen). In the past, the focus was mainly on the production side: audiovisual projects that receive production support are actively guided and informed about their environmental impact. In 2018, the sustainability coordinator took steps to expand the approach in scope and depth:

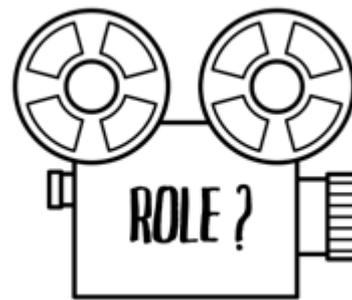


- On one hand, the definition of sustainability was expanded; VAF uses the UN sustainable development goals (SDGs) as a moral compass. These SDGs provide a broad and useful framework for inspiration for the audiovisual sector.
- On the other hand, VAF is involving more actors within the sector:
  - o VAF educates about 120 students from film schools through information sessions (as part of a project of the Sustainable Materials and Energy Management Fund)
  - o VAF inspires and creates awareness about the impact of storytelling: the scenario influences the logistical choices that are made on the set, but sustainability can also be subtly incorporated into the storyline.
  - o VAF is working with more genres: animation, documentary, short film, ...

- VAF is engaging exhibitors through public relations activities: the exhibitors' breakfast on sustainability brought together around 100 people.
- VAF is setting up new partnerships: VAF actively collaborates at the level of the Flemish Region (OVAM, Vlaanderen Circulair, Pulse transitienetwerk, VRT), Belgium (collaboration Screen Brussels, Fostplus) and the EU (knowledge sharing via Cine Regio and Green Screen).
- VAF makes sustainable choices itself (commuting, purchasing policy, paperless files ...)

## 22. WHAT ROLE?

The key question in the whole debate is: what role do you play? Not only as an individual, but also as a professional in the audiovisual sector. That role differs from person to person. What is the role of a teacher? Perhaps you are an employer and you can think about the commute, for example. Or do you produce films and do you have an impact on the set? Perhaps you have a social role as a writer? It is important that you are aware of your personal role. Today, but also in the future.



## 23. THE AUDIOVISUAL SECTOR

You can potentially play a role in every part of the broader audiovisual sector. From the classroom to the cinema. And all the steps in between.



## 24. EDUCATION

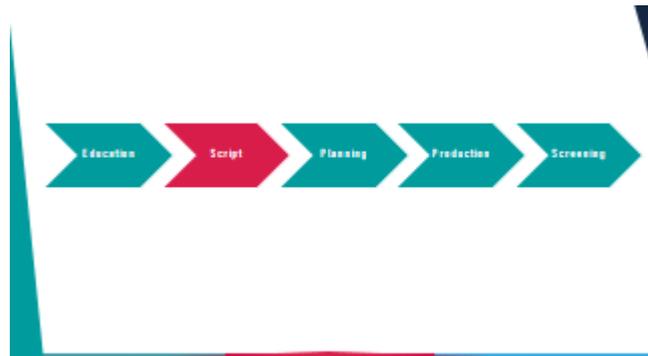
As a teacher, what you teach your students is a first important step. And that is what we are doing right now!



## 25. SCRIPT

### QUESTION: Can a script be sustainable?

Writing a script is a phase that is often underestimated in the audiovisual sector. But be aware that you have a crucial role to play from the moment you pick up a pen.



## 26. THE PEN

Writers have a tremendous role within the field of sustainability. Creative choices affect the complexity of the production phase.



## 27. LESS IS MORE

Less Is More is a French initiative for coaching writers, in which restrictions are used to explore the essence of their story. Their vision perfectly reflects the social role of stories and the responsibility of filmmakers.

Humans are special creatures. We have an innate need to learn from each other, to develop norms and values, to feel emotions. Stories play a crucial role in this. The question that arises is whether audiovisual projects, be they films, games, documentaries, etc., are intrinsic ways of telling stories? And when you tell stories, you can also talk about sustainable themes. It is a way to engage your audience in the themes that you consider relevant as a writer.

More info:

<https://lim-lessismore.eu/>

<https://www.youtube.com/watch?v=sEpPFGAL-lk>



## 28. IMAGINATION

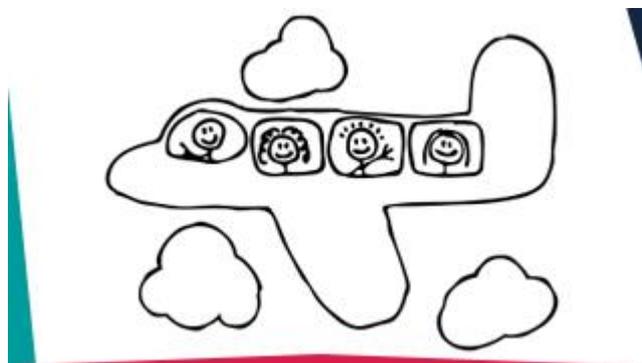
Media is all about imagination. Anything is possible. We can make people fly, drain the seas, ... anything you can dream up.

That imagination is what constitutes the power of our industry. We can touch people, move them, and make them reflect. We must use that social role very consciously and with great care.



## 29. FLIGHT SIMULATOR

At the VAF Storycon conference, the well-known philosopher Johan Braeckman compared film with a flight simulator. As a future pilot, you spend hours in the classroom. You learn everything about flying, aerodynamics, safety, ... Afterwards you spend days in a flight simulator. There you will be trained for all possible circumstances: engines that fail, thunderstorms, storms, difficult passengers ... All possible situations are simulated.

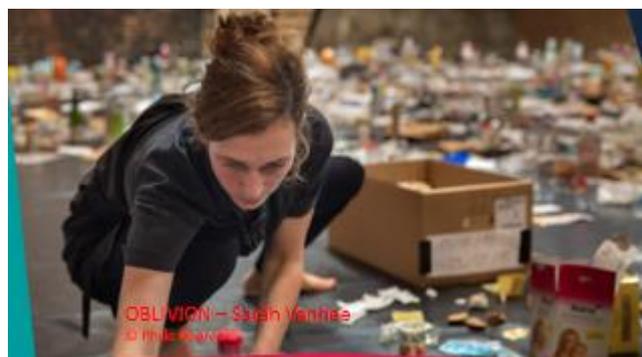


Movies do exactly the same thing. They hold a mirror up to the audience. While watching, you constantly ask yourself 'How would I react in that situation?'. When developing scripts, you determine which scenarios are included in that 'flight simulator' for our society. This is not only about choices in terms of content. The script also strongly influences the logistical organisation on a film set. Filming abroad, for example, has a very large impact, expressed both in CO<sub>2</sub> and in production budget.

More info: <https://www.storycon.be/team/johan-braeckman/>

## 30. SARAH VANHEE

With her work 'Oblivion', Sarah Vanhee perfectly illustrates how, as an artist, you can use your artistic language to influence society. She collected all her waste for an entire year. From used packaging or a piece of paper to a discarded mail. She took this as a starting point for the question 'at what point does our responsibility for the things we throw away end?'.  
OBLIVION – Sarah Vanhee  
© 2018 Sarah Vanhee



More info:

<http://www.sarahvanhee.com/oblivion>

<https://www.youtube.com/watch?v=OFcd5ptNFaU>

### 31. SAMUEL IN THE CLOUDS

This Flemish documentary is about Samuel, the owner of a ski station in South America. It is essentially a story about the effects of climate change. After the production was over, the team considered their social role. Should we pay Samuel a wage to be himself, or do we help the local community by spending money locally, for example? In the end, it became a combination of both choices, with the film being released locally, drawing attention to the local impact of the issue of climate change. A good example of how you, as a filmmaker, can do more than just create a product.



More info: <http://samuelinthecLOUDS.com/>

### 32. FLOTSAM

A different story from a different sector. Flotsam is a game in which you collect waste at sea. You use it to build a new community. The special thing about this game: very subtly, a story is told about sustainable materials management, about the value of waste and how to turn old things into new things.



Via the game medium, Flotsam reaches a target group that is otherwise difficult or impossible to reach through traditional brochures or websites. This opens up potential partnerships with organisations working on waste prevention and recycling, such as Fostplus and the *Openbare Afvalstoffen Maatschappij*.

More info: <http://www.pajamallama.be/flotsam/>

### 33. ZOOKS

Zooks is a Flemish animated film that highlights the importance of caring for fauna and flora aimed at a young audience. Again, a very sustainable message.



More info: <https://www.flandersimage.com/browse-titles/detail/zooks>

### 34. BREASTFEEDING SUPPORTING ACTORS

'Kind en Gezin' is a government agency that works to promote the well-being of the child. They developed 'Breastfeeding extras', a project in which young mothers are asked to appear as extras in film and TV projects. The aim: to highlight breastfeeding and to encourage young mothers to choose breastfeeding. It's promoting breastfeeding through product placement.



When you check 'Breastfeeding supporting actors' against the SDGs, you can instantly see how sustainable this project is: breastfeeding has a positive influence on the mental wellbeing of mother and child, boosts immunity, prevents breast cancer, requires no fossil fuel to heat up the milk, and there is no packaging waste or transport. So it has no adverse impact on climate or biodiversity. Breastfeeding costs nothing, so it also combats poverty. It makes little difference in terms of production: the mother and child are present anyway. The only difference is choosing between breast or bottle.

Of course, the idea is not that you have to show a breastfeeding mother in every film, but it is possible! It's about consciousness, as a writer. Be aware that through such subtle choices, you have an important social impact.

More info:

<https://www.kindengezin.be/>

<https://www.borstfiguranten.be/>

### 35. GIRL

Lukas Dhont garnered international acclaim with Girl. This film was not only produced sustainably, but also deals with gender. Again, a good example of sustainability at the script level. Girl is a tour-de-force portrayal of the issue of gender, but it also goes further. It is about the pursuit of dreams, about the unconditional support of a parent for his child.



**DO MORE? Which SDGs most appeal to your imagination? How would you subtly/not so subtly incorporate them into a film project?**

## 36. & 37. PRODUCTION

The next step, after the scenario development, is the production phase. A whole cast and crew on the set day in and day out naturally has a major impact. The choices you make influence the sustainability of the project.



## 38. 10 %

The VAF has been actively promoting sustainable production since 2013. In addition, during individual supervision of productions that receive VAF production funding, participants are required to draw up a personalised sustainable action plan. Sustainability is not just loose talk, but is a formal part of the agreement between VAF and the producer. Using a CO<sub>2</sub> calculator is one of the formal requirements in order to receive the final instalment of 10%. VAF uses its role as a fund as a lever for sustainability.

10 %

## 39. CARROTS

Motivation is a major challenge. Certain staff members, such as the location manager and line producer, play an important role and make impactful logistical choices on and around the set. However, the daily commitment of the whole team is also necessary. Preventing waste, correct sorting, sustainable mobility, etc. takes an effort from the entire team. It is important for there to be someone responsible for monitoring the overall aspect of sustainability who has the mandate to consciously make sustainable choices. But it is a team effort to actually make that sustainability a reality in the workplace.

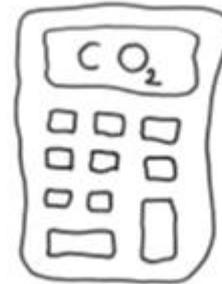


In some cases, sustainable purchases are more expensive, but often you can save quite a bit of your budget by making conscious choices. We will talk more about this later in the presentation. The difference you can make as a film professional is much bigger than the reduction of your impact by

The VAF has a sustainability coordinator. This person helps and inspires us to make sustainable choices. The VAF does not provide additional financial support for promoting sustainability, but does make the expertise of the sustainability coordinator available.

#### 40. CALCULATOR

The VAF not only requires an individual action plan tailored to the project, but also requires a detailed CO<sub>2</sub> calculation. To this end, it has developed a tool that allows the various domains to be assessed. All these domains are measured in terms of CO<sub>2</sub>.



#### 41. SPEEDGUN

Police uses high tech tools to measure speeding cars. These devices are an incredible example of innovation and technology. They help the police to accurately measure the speed of passing traffic. They don't prevent people from speeding, nor tell speed devils about the risks of speeding. They are one of the many tools to increase the safety on public roads.



DOES A SPEEDGUN  
PREVENT CAR  
ACCIDENTS ?

The same can be said about carbon calculators. In some cases people assume they are a magical solution and are the key to a sustainable film production. The good thing about carbon calculators: they teach you about the relative impact of different domains. But they are not the magic solution for becoming sustainable. In many cases they focus too much on reporting. They make a 'snap shot' once the production is finished. But do they push you and your crew into making sustainable choices?

From our experience, being sustainable is a combination of clever solutions. Financial incentives; inspiration from a sustainability expert; hands-on tips and tricks; sustainable innovations (and their availability on the local market), the right motivation and mind-set. The way to go green is an intricate combination of planned actions on all these fields.

#### 42. 73 TONNES

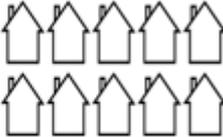
An average Flemish film emits 73 tonnes of CO<sub>2</sub>. Some films generate no more than 30 tonnes, while other larger (international) projects emit several hundred tonnes. Keep in mind: every film is different.

**QUESTION:** What does 73 tonnes of CO<sub>2</sub> represent? What is the proportion to, for example, the annual emissions of a Flemish family?

73 TON CO<sub>2</sub>

#### 43. 10 FAMILIES

The answer is 10-to-1. An average family emits a total of 7 tonnes of CO<sub>2</sub>. This includes transport, heating, food, TV, washing, going on vacation, social media, heating, hobbies, etc. A film emits an average of 73 tonnes of CO<sub>2</sub>, the average for a TV series is 123 tonnes of CO<sub>2</sub> (more shooting days for more screen time). Given the larger size, lots of transport and higher budgets, foreign productions often have emissions that are many times greater.

1 FILM = 

#### 44. TRANSPORTATION

Mobility represents 40% of the average emissions. The way we transport people and resources to and from the sets has a major impact. Choices such as promoting public transport and carpooling, strategic choices in terms of accessibility of sets, allowing people and trucks to stay close to the set and the use of sustainable cars and trucks are all possible solutions.



#### 45. Gangsta 1

Numerous sustainable choices were made during the shooting of Patser. One of these was renting an apartment near the film set in Antwerp, where the majority of the shooting took place. A place to sleep was provided for four department heads. In addition, there was a parking place for production vehicles in the parking lot of a local tow truck company. Normally, each person would commute back and forth between their home, the depot where the rented truck was kept and the set. By allowing both people and trucks to spend the night locally, the production significantly reduced the number of kilometres driven. That represented savings of some 19,000 km, nearly 10,000 euros and 3 tonnes of CO<sub>2</sub>. Plus, there is also a positive influence on personal well-being: by staying overnight locally, crew members no longer had to make long commutes.



	4 PEOPLE UP & DOWN 35 D	4 PEOPLE OVERNIGHT 35 D
KM	24 745	5 195
CASH	18 098	8 994
CO <sub>2</sub>	3,6	0,7

#### 46. Gangsta 2

The filming of Patser also required working abroad: the 3 shooting days in Morocco represented 114,000 km of journeys by plane and an increase in CO<sub>2</sub> emissions of 30 tonnes. This is just to give you an idea of the impact of air travel.



	3 DAYS IN MOROCCO	0 DAYS IN MOROCCO
AIRPLANE KM	114 000	0
CO <sub>2</sub>	30	54

It is best to check when traveling abroad:

- Whether there are alternatives to air travel ([www.ecopassenger.org](http://www.ecopassenger.org))
- Whether you can work with local people and resources
- Whether you can avoid unnecessary travel

#### 47. BUCK

Buck, a Ketnet fiction series, is a textbook example of sustainable production. The cast and crew were encouraged to carpool and take public transportation. The (call) schedule was adjusted, which made it possible to carpool. If required, shuttle buses were provided between the station and set. 2nd hand bicycles allowed sustainable travel between the production office and the set. A total of around 36,000 km of passenger transport was thus avoided.



		reality	ambitious
People	km	143 488	139 488
	CO <sub>2</sub>	27	27
	C	58 300	52 000
Goods	km	7 042	21 639
	CO <sub>2</sub>	3	27
	C	7 042	21 639

In addition, production vehicles were parked overnight at a local school. This way, 47,000 km of truck transport were avoided, representing savings of almost 43,000 euros. Buck saved a total of 53 tonnes of CO<sub>2</sub> on transport.

#### 48. USEFUL TIPS

This slide gives some concrete tips that are not only sustainable, but also allow you to save on a budget. Perhaps the most important tip is 'don't be afraid to be a pain'. Making clear agreements and monitoring them may not always make you popular, but the impact is important. It may also be advisable to find out which costs are accepted by a film fund: individual transport fees may not be covered; the cost of a (sustainable) rental car may be.



#### 49. LIGHTING

5% of the CO<sub>2</sub> impact can be attributed to energy consumption on the set. This mainly concerns electricity; to a lesser extent, heating. How much power do we use on the set? For lighting, for cooling, for recharging batteries, for computers?

Again, prevention is better than cure: the energy that you do not use is still the best choice. Can you use natural light? Can you possibly purchase local electricity? Via the location? Via on-site electrical boxes or market connections in public spaces? And does this electricity come from renewable sources? If you do use a generator: is it correctly scaled? Discuss your needs with the supplier.



#### 50. ON-SITE ELECTRICAL BOXES

This photo was taken on the set of Buck. The majority of the shoots were done at a fixed location in Keerbergen. A on-site electrical box was requested to provide the set with green energy. This had big advantages: it's environmentally friendly, user-friendly, no disturbing noises or exhaust gases, less transport, lower costs. The use of a traditional generator, the capacity of which was adapted



to the specific needs on the set, was limited to 2 days.

For people not familiar with an on-site electrical box: you often see a temporary power supply of this type on construction sites. You request this connection via the local power distribution company. The electrical box is rented and inspected; once installed, you can sign up for any electricity plan with a standard supplier.

## 51. BUCK

Not using a generator has a major impact on CO<sub>2</sub> emissions. Buck saved no less than 36 tonnes of CO<sub>2</sub>. There were also savings of 12,000 euros in the budget.

Buck's example was picked up by the city of London. Dozens of film projects take place there every day. Although the concept of the on-site electrical box is unknown there, the savings potential is enormous.



## 52. USEFUL TIPS



## 53. WASTE AND MATERIALS

28% of the average impact is related to waste and materials. We are not only thinking of all the materials needed to build and decorate sets, but also waste generated on the set, in the studio or production office.



## 54. CIRCULAR ECONOMY 1

Flanders is known as a leader in the field of recycling. We sort plastic, tins, paper, compostable waste, etc. But this recycling model is increasingly being abandoned in favour of a more circular approach. Consumption is viewed in a completely different way. Can I rent or borrow something instead of buying it? Can I use a service instead of a product? Can things be designed in such a way that they are easily repairable?



And can they be reused or dismantled after use? And if a product is no longer usable, how can we optimally reuse the building materials and materials? Remember Laura again!

In many cases people think that circular economy is a pseudonym for recycling economy. The next slide will show you that there is a big difference...

### ASSIGNMENT:

**What is the difference between ecodesign, product reuse, material reuse, recycling, upcycling, trash design and waste prevention? Think about how these terms are relevant to the audiovisual sector.**

More info about the circular economy:

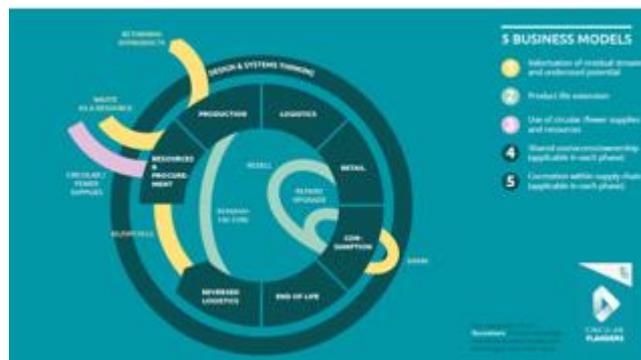
<https://www.vaf.be/duurzaam-filmen/workshops-en-infosessies/circulaire-economie>

[www.vlaanderencirculair.be](http://www.vlaanderencirculair.be)

## 55. CIRCULAR ECONOMY 2

So, what is so special about circular economy? And why is it that different from recycling? This slide shows a schematic representation of a circular model.

Imagine we are a company making laptops. We'll need resources to build our computers. Where do we obtain these resources? From whatever source? Or can we purchase recycled material? Or maybe we can even work with waste from a neighbour? Maybe a local reuse organisation can help us finding the right materials?



Next step: we have all the 'ingredients', and we can start the production. What logistic choices do we make as a company? How sustainable is our production process? Can we use renewable energy? Is our staff paid correctly? How about safety and the impact of commuting? How can we make sure that our product is designed with functionality, reparability and quality in mind? Is our laptop glued together, or can parts be easily replaced if needed? Did we consider the reusability and recyclability? What about that toxic element in some part, making it impossible to recycle it safely and making the production unsafe for our crew? We'll have a lot to think about!

Great news, our first batch of laptops are ready to be transported to our retailers. How do we pack them in a sustainable way? Can we reduce and reuse our packaging? And how do we organize our transport? Big half empty trucks? Or train transport and cargo bikes?

Our laptops are finally sold to the customers. Can retailers be part of our circular system? Help customers buying the right product, helping them out with eventual technical problems? Maybe we can consider investing part of our profit to sustainable projects?

Our customers use our laptops. But maybe we can consider leasing or renting out our computers. Our customers pay for the service 'laptop', instead of owning a laptop. Or maybe a student could rent one of our computers during his/her study? Can our laptops be repaired easily?

After years of intense use our laptop is facing its 'end of life'. How do we organise our 'extended producers responsibility'? Do we take back our laptops, do we refurbish our old models or can we reintegrate them into the production of new laptops? Maybe we can work with social economy for the collection and dismantling of our products? OR use our waste materials as a source for another company?

As you see, circular economy is about clever innovative choices throughout the entire life span of a product. The focus is on prevention, closing material loops, sustainability throughout the value chain, new ways of consumption (product as a service).

And how does this reflect upon the film industry? Well, good question. Try to fit in an audiovisual production in this scheme? It is difficult... Maybe a film is a more complex process, combining different cycles? Set construction could be a separate cycle, as are catering, make-up, transport and costumes... One of the upcoming challenges is to translate sustainable choices, for different domains within production, with circular solutions in mind.

## 56. MODS

MODs are a nice example of the circular economy. This modular system consists of wooden frames. They come with standard openings for bolts and technical pipes. With this system you can build sets, 3D structures, stages, stands, furniture, etc. The modules can easily be screwed together. You rent or buy them, and finish them as you wish. Afterwards you disassemble everything and you can reuse the MODs.



More info: <https://www.mymods.be/>

## 57. KRINGVERHUUR

Creative solutions are sometimes essential. Kringverhuur, a rental service of 'Kringwinkel Antwerpen' offers 2nd hand goods as a rental service for events. They offer reused sofa's, tables, decoration for conferences and parties.



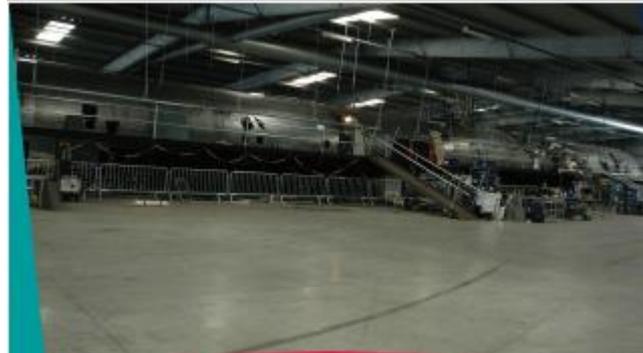
As partner of the Circular Flanders funded SCIFI project, they will test if a set can be rented. The experiment will be focusing at:

- What type of generic products are relevant for film makers? A similar rental service might not be the place to rent specialized props, but might be relevant for more day in day out products that could be used on and behind the film set.
- How to involve set dressers and costume artists? Can a rental service help them reducing waste streams? What would be the effect on budgets?

This pilot has a lot of potential: it will not only help Kringverhuur to fine-tune its present circular business model, but might also inspire reuse shops in other (European) regions to set up similar models.

## 58. TORPEDO 1

This strange metallic object is a real size copy of a submarine, made for Torpedo. It represents an enormous investment, both on cash as in material and labour and showcases the creativity and craftsmanship that is to be found in the AV sector. This construction also represents an enormous challenge: how to imbed eco-design and what to do with it once the production is finished?



## 59. TORPEDO 2

**Question: what would you do, with a similar construction? How would you adapt circular economy principles within the construction?**



A Team Productions, responsible for Torpedo, rented an affordable storage for constructing and storing this submarine. This allows them to look for funding for a 2<sup>nd</sup> film, allowing them to reuse the submarine as it is. If reusing this submarine seems to be impossible, they consider selling it to a museum, attraction park, escape room, ... Or maybe even cut it in slices. Once

set up vertically, these slices can provide a cosy meeting space for hotels or office buildings. Worse case it will be dismantled and recycled.

## 60. BOTTLES

Daily habits also have a major impact. For example, investing in water bottles and/or reusable cups can be a wise choice. Use tap water whenever possible. Tap water is one of the safest and most controlled products around, it's cheap, does not have to be transported by truck and has no disposable packaging.



**EXERCISE:** Calculate how many disposable cups are thrown away on a film set.

**How many people are there walking around on a typical film set?**

**How many shooting days does it take to make an average film?**

**How many times a day do you have something to drink?**

**How many cups does that make in total?**

**How many m<sup>3</sup> of waste would that represent (2000 cups = approximately 1 m<sup>3</sup> waste)**

## 61. QUIZ

Time for a little quiz about waste. In Flanders, the Public Waste Agency of Flanders (*Openbare Vlaamse Afvalstoffen Maatschappij* or OVAM) has been working for decades on a progressive waste and materials policy. There is legislation that determines which waste streams households and businesses must selectively collect (sort). You are all potential professionals.



**QUESTION:** How many different types of waste do you have to selectively collect within a company? Take a stab.

## 62. 21 WASTE FRACTIONS

The correct answer is 21. This slide shows 18 current waste streams; 3 more plastic streams have recently been added. As a company therefore, if you come across one or more of these streams in your company (or film set), you are **REQUIRED BY LAW** to collect and dispose of them separately. In practice you will probably never be confronted with all 21 streams. But if you use a chainsaw, you probably have engine oil. Used batteries? Leftover paint? PMD (plastic, metal and drink cartons)? Paper? Rubble?



It is important to estimate which waste streams you think you will encounter and in what volumes. And to prepare for it. There are not only legal regulations about the types of waste, but also about how you should dispose of them. There is a distinction between household waste (which is collected through municipalities) and that of companies (which is either collected through commercial collectors; or in some exceptional cases through municipalities or intermunicipal waste companies). If necessary, consult your local waste agency.

More info:

<https://ovam.be/iksorteer>

<https://go4circle.be/>

**QUESTION: Is there similar waste legislation for the selective collection of commercial waste in your region? Is there a governmental organisation related to waste and circular economy? Are there practical guidelines and can they be adapted to film production?**

## 63. USEFUL TIPS

Mainly, just use common sense, because smart choices pay off. Pay attention not only to the items you purchase (bulk instead of individually packaged products, 2nd hand (e.g. via De Kringwinkel), ... But also ensure the correct disposal of your residual waste. Donate reusable items to people who can use them.



- CUT THE CRAP: NO WASTE = CHEAPEST
- REUSE (2 WAYS)
- WHAT IS FILMED?
- ECODSIGN
- PLAN WASTE DISPOSAL

## 64. CATERING

Catering is perhaps the most important domain of all: people like to eat and drink well. 8% of the impact is attributable to what we eat and drink. What are we eating? Where does it come from? Is it seasonal? Possibly vegetarian? These are all ways to reduce the impact of food.



## 65. LEARN TO COUNT

It goes without saying that good planning is important: how many people are working on the set? What specific agreements do you make with the caterers? How does the caterer deal with, for example, waste, transport, vegetarian diets?

Some projects take a creative approach to catering. On the Buck set, vegetarian fare was the norm. Meat was allowed, but had to be requested individually from the chef.



## 66. WHO ISN'T VEGGIE?

Riet De Prins, a producer for VRT (Flemish public broadcaster), found a clever way to stimulate people to eat vegetarian food. She simply reversed the question 'Who isn't veggie?'. People are allowed to eat meat, but have to order it directly. This way she created an extra threshold for meat-lovers. Most of the meals consumed during the production are veggie.

WHO ISN'T VEGGIE ?

## 67. CHOCO

Another great example is Cleo, the film by Eva Cools. As a director, Eva did not want any Nutella on the set. Not so much because of the palm oil, but because of the adverse effect on the health of cast and crew. By taking this position, she pointed out the importance of a healthy diet. 'Boerinneke', a Belgian chocolate brand could be found on the set. It is impossible to quantify this choice in terms of CO<sub>2</sub>, but it does have an important symbolic value.



More info: <https://www.independent.co.uk/news/business/news/nutella-does-it-cause-cancer-spread-chocolate-nut-italy-supermarkets-palm-oil-carcinogenic-risk-a7523851.html>

## 68. USEFUL TIPS

Common sense always comes first. Consider alternative methods, such as organising a cooking competition with home-made cookies or a 'least possible meat' competition to motivate employees.

Coffee is an important area. Coffee makers that use capsules are often provided. This means a higher cost (around 3,000 euros) compared to a traditional filter coffee maker with thermos. You can not only save money, you also have less waste and no noise pollution.



- WHO ISN'T VEGGIE?
- TAP WATER IS THE MAX
- LOCAL & SEASONAL
- VEGGIE COMPETITION?
- COFFEE

## 69. POST-PRODUCTION

The last domain is pre and post production. This represents 19% of the average impact. The main focus is on energy consumption (heat and electricity) in the production office during the preparatory phase and post-production, on the power consumption for editing, special effects, etc.

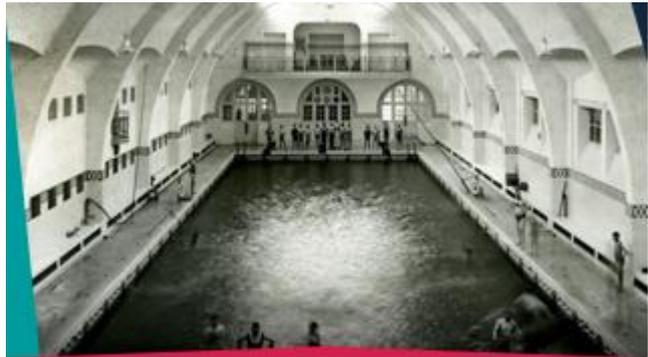
Here again, good coordination with the supplier is important: when choosing a partner for post-production, aspects such as accessibility and energy efficiency can be a criterion. Good agreements about mutual expectations (what do you want as a customer, what material must be supplied) prevent unnecessary work.



## 70. SWIMMING POOL

This swimming pool in Paris is a great example of how far you can go as a company. In this case the water is heated with the residual heat generated by the servers of an animation studio. Or how the waste product from one (heat from servers) becomes a raw material for the other.

More info: <https://stimergy.com/en/>



## 71. USEFUL TIPS

Here are some tips for making sustainable choices in the field of pre and post-production. The notion of 'Recycling image material' may sound outlandish, but it's actually possible. By using existing material, you can save tremendously on production.

An important domain is related to the storage and distribution of film material. What is the environmental impact of streaming platforms? How to store images without consuming enormous amounts of energy? Even within this more technological field, sustainable choices should be considered.

More info: <https://theshiftproject.org/en/article/unsustainable-use-online-video/>

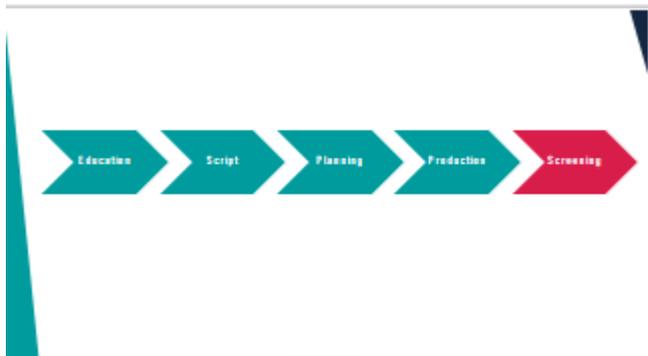


## 72. SCREENING

We just finished our production. Now it is time to show it in a cinema or at a festival. A final domain on which you have an important impact is screening. The choices you make in your cinema have major repercussions!

Again, you can ask yourself 'What role do I play'?

- You are an employer. How does that translate into commuting, diversity in the workplace, IT, etc.
- You organise public screenings. How accessible is your festival? Is public transport promoted? How energy-efficient is your projector? What products do you sell in your cafeteria or store? Are those products produced locally and do they have low-waste packaging? Is your cinema accessible for all income groups? Do you use energy-efficient LED lamps?



The choices you make in terms of content are also important: which film genre do you show? Do you make your screen and infrastructure available to third parties?

### 73. CINEMA NOVA

The eclectic cinema Nova (<https://www.nova-cinema.org>) is hidden in the heart of Brussels. At first glance, you think 'how can such an old place be sustainable'? Calculated in CO<sub>2</sub>, you might be right. But this arthouse cinema is a perfect example of social sustainability. Their sustainable choices are obvious, when using the SDG's as a reference:



- They host (film)related events and are a meeting point in the city
- They offer their screen to young filmmakers.
- They offer with locally made drinks
- They give interns the possibility to gain work experience
- They screen films in their original version, offering their own subtitling in dozens of different languages
- They have gender neutral toilets

As showcased by Nova: sustainable choices are much broader than just reducing CO<sub>2</sub>.

More info:

<https://greenfilmmaking.nl/2018/12/bijeenkomst-brussel-groen-in-de-bios/>

<https://xn--grneskino-r9a.de/blog/ueber-das-buch/>

### 74. SOFT DRINKS

The well-known Brussels concert hall Ancienne Belgique is a textbook example in terms of sustainability. One of their conscious choices: deliberately not offering plastic packaging for sale. Whereas they used to work with 20 cl disposable bottles, they now resolutely opt for soft drinks on tap (the syrup base is supplied and mixed on-site with tap water) and reusable cups. Less transport and less waste.



Alternative drinking water systems such as Robinetto can drastically reduce the amount of transport and waste. More info:

<https://www.abconcerts.be/en/about-ab/an-ecodynamic-management/23/>

<https://www.robinetto.be/nl>

## 75. COMMUNICATION

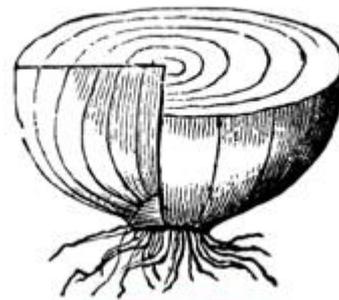
You can approach the issue of sustainability, whether it concerns choices in the classroom, script, production or screening, very technically. But good communication, whether it's towards your direct employees, your partners and suppliers, or your audience are just as important.



## 76. ONION

Up to now, we have been talking about all the fields in which sustainable choices are possible. But those choices are interrelated, just like the layers of an onion:

- Sustainability is much broader than just CO<sub>2</sub>. It involves various options, with or without the SDGs as a guide. Different domains are involved. Transport, electricity, sets, catering, ... sustainability is the sum total of all these efforts.
- There is no point in working sustainably during the shooting phase locally, but then cancelling out all those efforts with unnecessary air travel.
- Sustainability is not the responsibility of one person, it is teamwork. Every department and every individual has their own responsibility.
- Sustainable choices are sometimes more expensive, but sometimes they in fact save money. The line producer has an overview of the budget and is best placed to help assess sustainable choices.
- Don't forget: it should also be FUN.



## 77. COMMON SENSE

Sustainability does not have to be complex. The point is to use common sense! Is a hybrid car more sustainable than a diesel one? What does it matter, when you can carpool or promote public transport? The point is to look at your daily job differently and creatively. It's not rocket science!

Sustainability in the audio-visual sector is a clever combination of different solutions.

There is no magic involved. In many cases all you need is common sense. From our experience clever actions at different domains are needed:

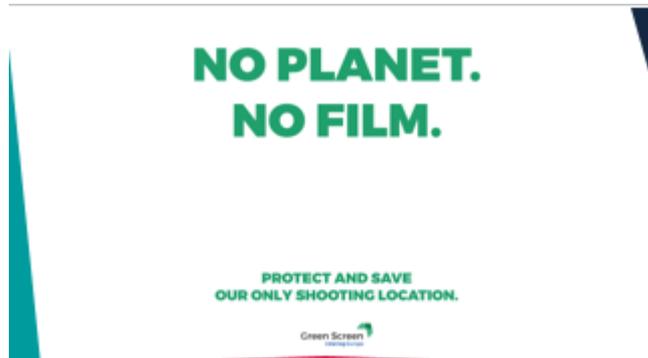
- Funding (costs related to sustainable choices should be eligible)
- Mind set (we have to think about motivation; the solutions need to come from bottom up).



- Tools (useful tools like environmental impact calculators and practical guidelines should be made available. They should be uniform at EU level)
- Education (people have to be informed about the topic)
- Market (sustainable alternatives are only useful if available on a local market)
- Strategy (sustainability should be imbedded into local or regional film strategy; film funds and commissions play a vital role as ambassador)

## 78. NO PLANET NO FILM

Sustainability is not a gimmick. It is a common responsibility, because without a planet, we lose our only film location...



## 79. CHALLENGE

Now it is up to you... How will you use what you just learned when doing your job as a film professional?

I hope you now have a good feel for the issue of sustainability in the audiovisual sector. Think of the SDGs as a moral compass. Remember the different roles and different domains. Remember those 10 households and Lucia. And above all, use your common sense.



## 80. CONTACT

If you still have questions regarding this theme, you can contact the VAF sustainability coordinator. VAF also maintains various guides, practical examples and tools that can help you in practice.

People with an interest in this issue can join the Facebook discussion group 'Agora for sustainable filming'.

