COP21 SPECIAL

GREEN FILM SHOOTING: UNITED NATIONS COP21 SPECIAL EDITION – IN COOPERATION WITH FILM4CLIMATE
RAISING AWARENESS FOR CLIMATE CHANGE

During the UN Climate Change Conference (COP21), the colossal facade of the French National Library will be transformed into a projection screen for a live video feed of penguins that French filmmaker Luc Jacquet will transmit daily from Antarctica. “We’re going to screen it at the Bibliothèque François Mitterrand in Paris to raise awareness on both penguins and the emergency situation in Antarctica”, says Jacquet in his ECO/COP Interview. Raising awareness for climate change is one of the primary goals of Film4Climate, a program initiated by the World Bank’s Connect4Climate. “We chose to focus on film because it has great powers of persuasion”, stresses Lucia Grenna, Program Manager at Connect4Climate.

Since its launch at the beginning of 2015, Film4Climate has participated in many industry gatherings and film festivals, where it forged a broad range of partnerships, including one with the French network Ecoprod, founded in 2008 by Catherine Puiseux, CSR Director, TF1 with the French network. Since 2008 by Catherine Puiseux, CSR Director, TF1 with the French network. Since 2008 by Catherine Puiseux, CSR Director, TF1 with the French network. Since 2008 by Catherine Puiseux, CSR Director, TF1 with the French network. Since 2008 by Catherine Puiseux, CSR Director, TF1 with the French network.

This issue will be addressed at the Audio-Visual Conference on Sustainable Productions in Paris on November 25, which Ecoprod and Film4Climate are hosting before COP21 kicks off. The IDay4Climate Action will take place then, and environmental filmmaker slate Jewell-Kemker will screen a thirty-minute segment from her debut feature film, An Inconvenient Youth, which tracks the rise of the global youth climate movement. Jewell-Kemker began shooting the film when she was fifteen years old.

Another highlight is the Sustana Awards, which recognize sustainable production solutions throughout the world. Innovative projects from nine different countries were reviewed by an International Awards Committee chaired by Arnold Schwarzenegger. The Hollywood actor, politician, and environmentalist is convinced that the media has a powerful role to play in the fight against climate change. “Through films, television, and all media outlets, we must continue to deliver the message that solutions are out there and they are happening now”, points out Schwarzenegger. “I believe films in particular can really inspire and make people want to take action.”

Olivier-René Véillon espouses the view that sustainable production must become standard operating procedure. “Now the carbon calculator exists. It is easy to use. It is free. Anybody can use it.” Meanwhile, however, there are different carbon calculators in different countries. “I think it’s inevitable that we will eventually have a universal, standard protocol”, says Grenna.

The basic principles of a sustainable production method, developed for sustainable production methods, provide industry professionals with guidance on a Film/TV production starts with the planning at the earliest stages of production. The implementation of these green measures and minimizing waste destined for landfills. The environmental impact of each action: transportation, electricity usage, hotels, etc. can be measured by a carbon calculator. This Excel Tool calculates a figure based on both cost considerations and carbon emissions. The carbon calculator can define the scope of sustainably efforts, so it plays an important role in production decisions. The next step: car rental agencies, LED lighting and solar generator suppliers, and organic-food catering services that rely on local food, reusable silver and dishware, as well as waste separation and access to grid power on set. The implementation of these green measures on a Film/TV production starts with the producer making a commitment, and it requires planning at the earliest stages of production.

The green goals must be defined in a sustainability plan, and these goals must be communicated to the various department heads.

YOU DON’T HAVE TO BE A SUPER HERO TO ACT SUSTAINABLY

The Film/Media Industry can make a difference. Sustainable initiatives are springing up all over the world.

Either a line producer or an Eco Supervisor can take the responsibility to help the cast and crew adopt sustainable practices.

The Best Practice Guide devotes individual chapters to each department: Production Office; Transportation; Hotel & Catering; Transportation of Equipment; Studios; Set Design; Lighting; Equipment Rental; Wardrobe and Make-Up; and Post Production.

The Theory of Everything: Each action has an environmental impact

Each production department has to consider specific requirements, which include electronic communications in the production office, and carpooling, the use of electric cars, LED lights in the studio, and rechargeable batteries in the sound department; all the way up to including sustainably-produced costumes, catering services that rely on local food, reusable silver and dishware, as well as waste separation and access to grid power on set. The environmental impact of each action: transportation, electricity usage, hotels, etc. can be measured by a carbon calculator. This Excel Tool calculates a figure based on both cost considerations and carbon emissions. The carbon calculator can define the scope of sustainably efforts, so it plays an important role in production decisions. The next step: car rental agencies, LED lighting and solar generator suppliers, and organic-food catering services that rely on local food, reusable silver and dishware, as well as waste separation and access to grid power on set. The implementation of these green measures on a Film/TV production starts with the producer making a commitment, and it requires planning at the earliest stages of production.

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According to a study performed by the European Broadcast Union (EBU), 2% of all worldwide carbon emissions result from information and communication technology. In France, the audio-visual sector is responsible for discharging approximately one million tons of carbon dioxide into the atmosphere every year. About a quarter of this is attributable to filmmaking. For industry experts Olivier-René Véillon and TF1 Director Catherine Puiseux, this was reason enough to create Ecoprod. Constituted as a network of film-funding agencies, broadcasters, and environmental agencies, the organization provides the Film/TV industry with the tools to minimize the ecological footprint production leaves behind. In order to provide industry professionals with guidance for sustainable production methods, Ecoprod developed Green Production Guidelines, which was inspired by the Producers Guild of America’s Unified Best Practice Guide.

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School, a new generation of filmmakers is adopting best practices, some of whom will eventually wind up being Eco Supervisors.

The green virus also worked its way into German film studios. At Studio Hamburg, several TV series have already gone green. As a pioneer in restructuring workforces in a climate-friendly way, Studio Hamburg produced its first live TV show sustainably. At Bavaria Film Studios in Munich, renewable energy is being generated by hydroelectricity and geothermal tailheating, which makes it one of the first climate-neutral film/TV studios in the world. From 2011 to 2014, the corporate carbon footprint was reduced by almost 97.5%. Prime-time shows in the studio complex enjoy the benefit of an ecological air-conditioning system. A central cooling system takes care of the computer servers, while also delivering cold running water as well as free cooling in the winter.

The PGA Green Guidelines are setting the standard

Best Practices are also being adopted in Italy. The Film Commissions in Sardinia, Trentino, and Torino-Piemont are planning to set their standards for sustainable film production in conjunction with the transnational energy provider Edison, which launched the Edison Green Movie protocol. In Trentino, there are already eco-certificates for restaurants, cafeterias, and event planners.

In Scandinavia, FilmPool Nord is collaborating with the Chalmers University of Technology in order to develop a computer modeling system as well as a methodology for calculating the environmental impact of film production. The calculation methods are based on life-cycle assessment and will enable recommendations to be made to individual members of the cast and crew.

In Great Britain, Film/TV production companies are following A Plan Do-Check-Act cycle that lies at the heart of BS 8909, which defines sustainable best practices. It provides a comprehensive standard for sustainability management in the UK film industry. BS 8909 was developed in 2011 when the BBC created a carbon calculator called Albert, which now has more than 800 users in the UK, among them over fifty TV production companies. The Pay-TV broadcaster Sky even demands a carbon footprint from productions they commission to outside contractors. According to the British Academy of Film and Television Arts (BAFTA), each hour of on-screen content is responsible for an average of 5.8 tons of carbon dioxide (CO2) emissions, which is equivalent to the emissions made by one UK citizen at work over the course of an entire year. The most significant carbon emissions are generated by travel (39%), followed by the production offices (30%). The BS 8909 helped productions such as Les Misérables, Anna Karenina, and The Theory of Everything switch to more sustainable working methods.

Think global, act local

Meanwhile, green film production is taking place all around the world. In Australia, Green Shoot Pacific, a sustainability consultant, follows a management system approach outlined in the International Standard ISO 20121 – Sustainable Event Management Systems. Among the most prestigious productions they greened was The Great Gatsby with Leonardo DiCaprio, which was shot by Baz Luhrmann in Australia. Although most crew members were personally engaged in environmental initiatives in their private lives, these actions had not been formally carried over to the workplace. Green Shoot Pacific’s departmental briefings and training seminars, and one-on-one communication ensured that many departments made significant changes in the way they thought about purchasing decisions, waste management, and environmental sustainability in general. The best practices for green production work globally, but when they are applied locally, it is essential to have a knowledge of production facilities with appropriate sustainability policies, as well as local sustainable suppliers. Relaying local knowledge also means making a commitment to engage local experts for green production. Follow the motto: Think global, act local!
A NEW WAY OF THINKING

Olivier-René Veillon, Founding Member of Ecoprod and Chief Executive Officer of Ile-de-France Film Commission, on the need for a carbon-free production process, sustainable solutions and COP21.

What approach is Ecoprod taking to make the Film / TV industry more sustainable?

Ecoprod is imagining a new production process. The idea is not to minimize the carbon footprint of cinema and television productions, but to imagine a new carbon-free production process. First, we make the producers conscious of what they are doing by requiring them to calculate their carbon footprint. This resulted from work we did in developing several tools, including Carbon Clap, a carbon calculator. It’s the only way to make producers conscious of their production’s impact on the environment. They are able to calculate the carbon impact in the initial stages of production. Producers sometimes simply think that their productions don’t have any impact on the environment, and this is a problem. Therefore, it’s crucial that they measure the carbon footprint they make.

What are the biggest obstacles facing Ecoprod?

In Europe, and especially in France, film and television production is highly diversified, which presents difficulties. We have more than 2,000 producers in the Ile-de-France region alone. Ninety percent of French production, as well as a great deal of international production, takes place in Paris and the surrounding regions because of the attractiveness of the city and its surroundings. We have to convince them to be conscious as well as to respect delicate heritage sites like Versailles, where they frequently want to shoot. We are promoting carbon-free production. That’s the direction we’re taking with cinema and audiovisual production. That’s why we’re involved as a Film Commission. Our concept is local. We’re responsible for this region.

How many productions have already used the carbon calculator? And how many companies?

About 200 companies have used or are using the carbon calculator. We enjoy the complete cooperation of the associations representing set decorators and film producers. Most of the technicians involved are participating actively. But we’re facing some reluctance from producers, who are focused on the economics of their productions. They haven’t yet realized that new production methods may be more economical, if the producer, of course, accepts another vision of production.

What has already been accomplished?

We have substantially reduced the number of generators used on shoots at major locations in Paris. We partnered with the French energy provider ERDF and the City of Paris to equip major locations where productions frequently shoot with power from the electrical grid. In Paris, we have about 100 locations that are used on a permanent basis: the Eiffel Tower; the Arc de Triomphe; and the banks of the Seine. We have equipped these locations with electric power so crews don’t have to use generators, which have a strong negative impact on the environment.

Besides energy, transportation is a huge carbon generator. How do you deal with this issue?

Old trucks, which usually have diesel-powered engines, leave a heavy carbon footprint. So, we are offering electricity-based alternatives to help companies find other solutions.

What benefits does sustainable production offer?

The key benefit is the reduction of a production’s carbon footprint. More and more producers, especially American studios, are going to be asking for a production’s carbon footprint, and they’re going to calculate it.

Meanwhile, we’re lobbying all the cinema financing programs in France in order to make it a requirement that producers submit not only a production budget but a carbon print of the production, as well as the application process for subsidies. It has to become standard procedure for producers. This is not the case now because the first step was to give them the tools to be able to address these questions. Now, the carbon calculator exists. It is easy to use. It is free. Anybody can use it. We need to get all our partners on board, the CNC as well as the regions, but especially the Ile-de-France Region, which will be headed by a new president at the beginning of next year. Film subsidies must require a sustainable approach. Now we’re ready to take the next step because we have the tools, we have the solutions, and we have the companies that are able to deliver the services. So, there won’t be any excuses.

This isn’t going to cause the producer any trouble, and it’s not going to create any difficulties because calculating the carbon footprint of a production is easy. And it has to be a criterion to evaluate the producer as well as the production. A good producer has to deliver accurate information on the production’s carbon impact and, of course, reduce it.

Is it a question of political will to go green or is it a question of practical implementation?

I think it’s both. We need to have the practical solutions in order to provide the political will the wherewithal to do everything that’s possible. Of course, the political will is always important, especially in our business, which in France is heavily regulated. We need a strong political will. I think this is the right time, since France hosting COP21.

What kind of impact does COP21 have?

It’s a fantastic opportunity to accelerate the process. It’s a great honor as well as a great responsibility to host the event. Then this region is going to have to show important sectors like film and television production what is possible to do today, and contrast it with what they are actually doing today. It’s important to look at the question in this context.

The CNC is doing a lot to support innovative approaches to give the companies the opportunity to outfit their fleets with electric trucks, which is absolutely necessary. TSF and Transpal are the two major rental companies in the Ile-de-France region. They are both signatories to the Ecoprod Charter. They realized that they had a great opportunity to provide a better service and to introduce a new way of thinking to future productions.

Is it still necessary to raise awareness about environmental issues?

Absolutely, and that’s why we’re going to introduce projects that have benefited from the support of the CNC and which offer operational solutions for production companies at our Audiovisual Conference on November 25. We have the tools. We have the financing.

Now, for the companies, it’s simply a matter of strategy and administration. After the presentations on November 25, we’re going to follow up with the Ile-de-France Location Expo in Paris in February. Ecoprod is going to network all the companies that are signatories of Ecoprod Charter with the professionals who are promoting their solutions for film/television production. Everybody who’s anybody in media production is going to be there.

What are the essential steps taken in this process?

First, we’ve been making producers conscious of what they’re doing. At the same time, we’ve been working with all the companies that are involved in the production process. We find carbon-free solutions.

We created the Ecoprod Charter for all companies involved in the film/television production process. Studios as well as service companies participate by acting sustainably. And to take it a step further, we offer innovative, absolutely carbon-free solutions. We’ve been working closely with the CNC (Centre national du cinéma), which has a fund dedicated to technical innovation in the production process. We are going to present innovations that offer carbon-free solutions at our Conference in Paris on November 25.

What is the impact of COP21? How does it affect the film industry in France?

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**ECONOMICALLY AS WELL AS ECOLOGICALLY EFFICIENT**

At French public broadcaster France Télévisions, going green is taken seriously. By 2020, the TV production group will cut 8% of its carbon emissions. Sophie Delorme, Corporate Responsibility and Sustainability Manager, gives an insight into the transition to sustainability.

**How does France Télévisions contribute to the Ecoprod Charter?**

We have continued our contribution and we have also worked to promote the Ecoprod Charter. The Ecoprod Charter has been implemented by about 50 suppliers and production companies. By becoming a signatory to the Charter, they agree to implement sustainability practices. Ecoprod has conducted workshops with signatory companies to help them adopt best practices in their normal course of business. In addition to workshops on Green IT and Waste Management, we helped the companies find suppliers that will service their sustainability requirements. After the one- or two-day workshop, they walk away knowing that it’s pragmatic to be more sustainable, and that it’s simple, too.

**What kind of sustainable measures have already been implemented by France Télévisions?**

Our group includes five TV channels and various satellite, radio, and streaming channels. France Télévisions made a commitment to implement sustainability across the entire company. Our environmental strategy is to first reduce our carbon footprint, to make our production footprint as small as possible and then to position our studios as a leading media group to raise awareness of the need to drive positive change on environmental issues among our audience and partners.

We’re going to reduce our carbon emissions 8% by 2020. This is to say that because implementing and managing this program for the entire group is a formidable task. Besides reducing our carbon footprint behind the camera, we’re also producing content that raises awareness of the different aspects of sustainability. Television plays a significant role in raising awareness on social issues.

**What benefits motivate a broadcaster to go green?**

Broadcasters can save money by reviewing production methods to reduce the amount of energy and resources used. Sustainable production is making programs in a way which will have the minimum impact on the planet and the maximum benefit to the people and places involved in their creation. We made investments in our studios in order to reduce the carbon footprint. All our new soundstages have been equipped with LED lighting, which cuts our energy costs 30–50%. This, of course, is an economic advantage in the long run. The investment pays itself off and then it becomes a long-term benefit. We also have a green supply chain for IT and we’re using electric or hybrid cars whenever possible. Anytime we have to replace something, we make sure that the replacement unit will be economically as well as ecologically efficient.

**Which productions have been following the best practices?**

It's not restricted to any specific type of production or format. Thanks to the upgrading of our studio facilities, we broadcast all our news shows in an increasingly sustainable fashion. And we are trying to green our productions and co-productions. A good example is the well-known French TV series Plus belle la vie, which adopted sustainable practices. They even produced a clip about it.

Are these productions using Ecoprod’s Carbon Clap?

Not all of them. The Carbon Clap is a great tool to monitor our carbon impact when producing a program. If they reduce water consumption, recycle more waste materials, and manage the travel itinerary, they can cut carbon emissions, which is sustainable as well as economical.

**Does France Télévisions require sustainable measures for commissioned productions?**

We’re working on this issue with them. It’s not obligatory yet. We’re working with green suppliers who can meet our sustainability requirements. The next step is to ensure eco-friendly production practices locally in the terms of co-production contracts. Every business in Europe has to cut its carbon emissions and increase its sustainability practices. The Film and TV Industry has to do its bit to reach this important goal. That’s why the Ecoprod collective is so important. Because it helps producers assume the responsibility of making their production methods more sustainable.

**SUPPORT FOR SUSTAINABLE SOLUTIONS**

The French film funding institution Centre National du Cinéma (CNC) launched a new initiative in 2014 to support sustainable solutions which is gradually gaining recognition in the French film TV industry. The Green grants are part of CNC’s program, which has a yearly budget of €60m to support TV and feature film service providers. “In 2014, we supported one project with a €24,000 grant. This year, we’ve already greenlighted three projects with grants totaling €85,000,” reports Baptiste Heymann, Head of Techniqua and Innovation at CNC. “Depending on the size of the company, we support anywhere from 40% to 60% of the cost of investing in environ-
Climate change radically challenges our economic, social and individual behaviour because it requires new systems of production and consumption. The pioneers of environmentalists of the 1970s began a process which has changed our view of nature – and it’s up to us in the 21st century to act in the light of that knowledge. Hopefully COP21 will be the start, accepting that fossil fuel cannot be the future of our energy, and that the true costs of our production and consumption cannot be measured only in money.

Jerry Rothwell
Documentary Filmmaker

THE GREEN GODDESS

Catherine Puiseux, Ecoprod founder and CSR Director, TF1 Group, launched the first carbon audit of the audio-visual industry in France. In collaboration with Olivier-René Veillon, she founded Ecoprod, which provides tools for sustainable productions.

How many producers are using the Carbon Clap?

About twenty productions last or use Carbon Clap each month, which results in about 100 to 150 evaluations per year. We have about 7,000 production companies in France, which is due to the great number of independent producers. We also developed the Ecoprod Production Guide to provide sustainability suggestions and instructions for each production department. The idea is that crew members adopt these best practices and, in turn, pass them on to other productions. In 2014, Ecoprod launched the Charter as well as a certification label for suppliers. About fifty companies have already signed on to the Charter.

Are TF1’s in-house productions using these tools too?

We tested the tools first with R.I.S. The series Jit in 2012 was then transferred carbon-neutral. Our tools and production methods work best with episodic TV fiction. Ecoprod is developing a new Carbon Clap, with more financial data to estimate the cost of the carbon footprint so that producers can assess the environmental impact of any item in the production process. Now, the question is how to get the audio-visual industry to adopt sustainable production methods more quickly.

Catherine Puiseux, Ecoprod founder and CSR Director, TF1 Group

TF1 TAKES GREEN STEPS

Thanks to the efforts made by Corporate Social Responsibility (CSR) Director Catherine Puiseux, the TF1 Group started carbon auditing based on the Blain Carbons®, which is now standard procedure. The company’s continuous improvement plan goes beyond legal requirements to manage energy consumption, raw materials, and waste. Environmental issues have been factored into engineering projects at the design stage, whether it be on location, in the studio, or on IT systems. The installation of LED studio lighting made it possible to cut on-set power consumption by 70% for the same amount of light as conventional studio use. Burnt-out studio lights are recycled through the Pliclyon program.

TF1 has issued a policy for responsible purchasing that promotes fair trade and “green” products. The company buys cars with CO2 emissions of less than 170 g/km, and it has a policy of alternating that uses electric vehicles instead of taxis. With initiatives like Sustainable Development Week, the TF1 Group encourages its employees to contribute to sustainable development. Ecocitadis reviews and assesses the CSR policies of the Group’s largest suppliers.

Catherine Puiseux, Ecoprod founder and CSR Director, TF1 Group
THE GREATEST CHALLENGE
OF OUR GENERATION

After making March of the Penguins, Academy Award-winning Writer/Director Luc Jacquet returned to Antarctica to shoot Ice and the Sky.

In Ice and the Sky, we learn that Claude Lorius was drawn to return to the Antarctic just as you were. Why is Antarctica so fascinating?

Living in the Antarctic gives you the feeling that you have to survive on your own. I really like the aesthetic point of view, the landscape and high geographic formations. It speaks to me very deeply. Perhaps also because the light changes all the time and because it is pure, since everything is white until the light changes just a bit, and the landscape hovers around you. It is absolutely incredible.

I also love it because it’s a challenge, much like trying to understand who you are in the middle of a storm. It is interesting. It presents the true scale of human vulnerability before nature. I also love the relationships that the people who live in Antarctica create. You have to have solidarity and you have to take care of those people around you.

Everyone who goes down there is drawn by the same fascination. Maybe this is the reason why people who have gone to Antarctica befriended other people who have been there. We share so many experiences.

Do you see any parallels between Claude Lorius’ life and yours?

Yes, there are many parallels. Even though Claude has got forty years on me, I first went to Antarctica for the same reason that he did. While I was a university student, I happened to read an ad looking for someone to live in Antarctica for a year. Like Claude, I found my vocation there by chance. For him, it was science; for me, it was filming. Most people go to Antarctica for the sake of adventure. But after the initial Antarctic experience, both Claude and I changed our plans and decided to do something different.

How did that change your life?

When you’re in Antarctica, you get the feeling that you are hovering above the planet Earth, and you get a powerful sense of empathy for the planet because you are so far away from society. When you do return to society, you feel compelled to take care of the planet. People who have lived in a space station get the same feeling. It’s called “the overview effect”.

As Claude Lorius explains in your film, a single air bubble can tell us everything about temperature, climate, and the impact of carbon emissions. So, has civilization also left its mark on Antarctica?

To find evidence there of human environmental impact means that we no longer have any choice. We are living on a raft, so we have to take into consideration the fact that everything has an impact somewhere else in the world. For me, this was the real revelation inspired by Claude’s work. He said that if we burn something somewhere, it’s going to have an impact somewhere. And no one, either rich or poor, is going to be spared. People have to take responsibility for their actions.
French glaciologist Claude Lorius has taken part in more than twenty polar expeditions, most of them to Antarctica. The scientific discoveries that Claude Lorius published in the mid-1980s could have made a difference, but his warnings went unheeded. Do you expect major policy changes at COP21?

Claude is optimistic because no one talked about global warming thirty years ago; today, everyone is aware of it. But this is not enough, despite the fact that there are many people in civil society who are committed to taking action. Of course, things are not going fast enough to reply successfully to the challenge of global warming. We have to create a new level of engagement. We need people who represent mankind instead of the presidents of nations. We need people emotionally. Everyone is aware of what is happening around us, so now the problem is to connect people to this issue. I think it’s better to connect people to the issue emotionally. A well photographed story about an extraordinary man is better than repeating the fact that carbon dioxide levels in the atmosphere are rising. I’m trying to find a new way to connect people emotionally.

What approach is your non-profit organization Wild Touch taking?

We are conducting a lot of educational programs because, as part of a network of scientists, teachers, artists and filmmakers, we are able to find a common language to help young people and educators understand what we’re talking about when we talk about global warming. Marion Cotillard did the voice-over for the ice and the Sky educational program because it was important for her and because she wanted to do something for the planet. We also produced educational programs about forests. The next topic will be biodiversity.

What impact can films have?

Is ice and the Sky a call to action?

This is a political film. I am fed up with seeing gadgets and machines, but we are still unable to solve the problem. I think this is the greatest challenge our generation faces.

What impact can films have?

Everyone is aware of what is happening around us; so now the problem is to connect people to this issue. I think it’s better to connect people to the issue emotionally. A well photographed story about an extraordinary man is better than repeating the fact that carbon dioxide levels in the atmosphere are rising. I’m trying to find a new way to connect people emotionally.

What approach is your non-profit organization Wild Touch taking?

We are conducting a lot of educational programs because, as part of a network of scientists, teachers, artists and filmmakers, we are able to find a common language to help young people and educators understand what we’re talking about when we talk about global warming. Marion Cotillard did the voice-over for the ice and the Sky educational program because it was important for her and because she wanted to do something for the planet. We also produced educational programs about forests. The next topic will be biodiversity.

Are you planning anything for COP21 in Paris?

I will be in Antarctica where we’ll be shooting a film with a crew of ten people. During COP21, we’re going to transmit live video of penguins from Antarctica every day. We’re going to screen it at the Bibliothèque François Mitterrand in Paris to raise awareness on both penguins and the emergency situation in Antarctica.

I will be there with two highly regarded French photographers: Laurent Baulette who’s going to dive deep underwater with the penguins; and Vincent Munier, who’ll take the high ground. They can get absolutely amazing shots. Emotion and the power of the image will raise awareness during COP21. The projection screen is more than 60 meters high, so it will be a towering image.
Many of the directors served as jury members for the Action4Climate Documentary Competition, whose jury was chaired by Mexican Director and Jury President Alfonso Cuarón and his brother, environmental scientist Alfredo Cuarón. "Right now, we don’t have time to take small steps with different initiatives", stressed Alfredo Cuarón in reference to the upcoming COP21 in Paris. "It’s time for a bigger movement." The brothers pointed out that there is a need for a new economic system that treats people all over the world fairly. “But change is built one step at a time”, emphasized Alfredo Cuarón. “Cinema can have a positive effect. The power of images is amazing”. He suggested creating some general standards for filmmakers worldwide in order to minimize the environmental impact of filmmaking and to maximize the great resulting benefits. "Science and the Arts can work together and change the world now", added Alfonso Cuarón. "We can’t wait. We need change. The future is now, because what we do now will affect coming generations".

Similar assessments have been made at the Film4Climate Green Film Forum that took place at the 30th Guadalajara International Film Festival in March 2015, where the participants issued a declaration of the film industry’s commitment to social and environmental responsibility, including biodiversity conservation, waste disposal, and climate change awareness, and action.

"Every step starts with awareness building", says Grenna. “That is why we launched Film4Climate".

As filmmakers we have a double opportunity to help ensure that life itself – the life of our precious earth and that of all beings who depend on its bounty can continue. Every step of the filmmaking process can be made without waste and thoughtless exploitation of resources in the physical world.

Sally Potter
Director
Climate change is a global problem – but the transition to a low-carbon economy that does not rely on fossil fuels, is the main driver of this global problem. Now is the time to divest and invest to let our world leaders know that we, as individuals and institutions, are taking action to address climate change, and we expect them to do their part this December in Paris at the U.N. climate talks.

Leonardo DiCaprio
Actor / Producer / Environmentalist

The POWER OF PERSUASION

With the Film4Climate initiative, the World Bank Group is taking on climate change. Lucia Grenna, Program Manager and Donald Renavaud, Creative Producer at Connect4Climate, World Bank Group, give us a strategic preview.

What does Film4Climate want to achieve?

Film4Climate is a global initiative of the World Bank’s Connect4Climate programme (connect4climate.org). It aims to help reduce the environmental impact of film production and raise greater awareness of climate change issues through the use of cinema and the whole visual media. The film industry can both set an example and save money by redesigning and refining production methods to reduce the amount of energy and resources used. What is more, messages woven into an engaging story on the big screen do indeed change minds, and hearts. Cinema and the visual media do indeed have great powers of persuasion. We are bringing together industry leaders who are already actively greening the silver screen, hosting high-profile events, facilitating climate change workshops with film industry heavyweights and through video competitions we are energizing young people to share their climate experiences.

We’re fighting the battle on two fronts. The first is to reduce the carbon footprint of individual productions. Thanks to country-specific carbon calculators, which are now in place, the green production system is up and running. The studios have been receptive to this idea and have taken encouraging action. The second front is introducing the issue of climate change into films that have a large audience and are relevant to this message.

Climate change is a global problem – but there are always differences of awareness across various countries and industries. What impact can the film industry have?

The Action4Climate competition that we launched in early 2014 for young aspiring film makers had a big impact. It attracted hundreds of entries from all around the world – from more than 70 countries. Among them was a beautifully animated film by a fourteen-year-old filmmaker from Argentina and a stunning poetic vision of climate change from the Philippines. We have also run other competitions for short public service announcements and for music videos, for example. We also run workshops for film makers to determine how they can most effectively use their discipline to make an impact. We also engage directors such as Bernardo Bertolucci, Wim Wenders and others to act as our ambassadors, not only in their own countries, but throughout the world, as well as in the films they make. Director Marc Foster made water a central issue in his James Bond movie Quantum of Solace. This has never happened before in such a big movie. We have also liaised with James Cameron, who backed the Emmy award winning documentary series Years of Living Dangerously documentary series about climate change, and help to promote all films that seek to address climate issues. As indicated, we are now working with the industry to establish the Climate Charter for film making.

Do we need role models?

Role models are always a help and can definitely help persuade people to change their behavior, but each individual has a responsibility to reduce their own private carbon footprint. Individuals need to take stock of their lives and assess the difference between what they really need and what they simply want. Most of the time we are just chasing after material things, ending up surrounding ourselves with clutter without ever focusing on real issues. Role models can help instill a sense of responsibility and can help build and conspire groups of individuals to come together to motivate their communities and make change happen.

Does Film4Climate have any suggestions for the film industry?

If producers acknowledge and apply Best Practices, then they’re going to reduce their carbon footprint. For example, the carbon calculators Carbon Clap in France and Albert in the UK are being used by over 1,000 production companies. With tools such as these, producers can see their progress, step by step, towards reducing the carbon footprint. Film makers also need to be aware that this is not simply a moral imperative, but an economic question as well. The evidence is there that sustainable film making can save substantial amounts of production money if done properly. The creation of a fund and maybe award structures, to reward sustainable productions that manage substantial reductions in their carbon footprint is entirely conceivable and desirable.

Is it possible to develop a globally standardized green protocol for Film and TV production?

Different carbon calculators in different countries – in Belgium, Germany, Italy, for example – are doing their job but there are many differences between them and rightly so, since the process depends on the conditions in each country. However, if we feel it is possible to establish uniform global guidelines as best practices guidelines in every country and that it’s inevitable that we will eventually be able to establish a universal, standard protocol. Right now, we are suggesting that producers keep using the guidelines in every country and 1 think it’s inevitable that we will eventually be able to establish a universal, standard protocol. Right now, we are suggesting that producers keep using the guidelines in every country and I think it’s inevitable that we will eventually be able to establish a universal, standard protocol. Right now, we are suggesting that producers keep using the guidelines in every country and I think it’s inevitable that we will eventually be able to establish a universal, standard protocol.

To film financing institutions, we’re proposing an initative that would give outstanding individuals or companies who have distinguished themselves in sustainable film and TV production reducing its carbon footprint. We are asking filmmakers all over the world to come together on the day of the Global Climate March on November 29th to shoot and edit a three minute film on the march in their city or a climate action undertaken that day, and to upload it simultaneously the same day, if possible, with all the others. We will produce a feature-length program with this material and make the best shorts available online. We also plan to screen a selection of these films at the Sustania Awards ceremony in May to demonstrate that this is indeed a viable strategy.

What is Film4Climate doing at COP21?

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Are you expecting real changes in sustainable film industry?

We’ll have to wait and see – especially in terms of how policies agreed upon might be financed, but generally speaking I think we can expect changes. Governments of 146 countries have made commitments to reduce carbon emissions. Two thirds of the countries that produce 84 percent of carbon emissions have already committed themselves. This is a positive sign, this is huge. Film can be a powerful tool to reach audiences who are not big polluters, but I’m certain they will be convinced by both the arguments and the commitments made by other countries. If this doesn’t happen, then it may be the time to find some other mechanism to replace COP.
What inspired you as a five-year-old to shoot films?
I was born in Los Angeles in 1992, a time when a lot of people were inspired by the Internet and were looking at the possibilities of how to use this powerful tool in a positive way. My mom’s friend Joann Mayes, who created the MiHE project, gave me my first camera and arranged for me to meet with the Vietnam War veteran and peace activist Ron Kovic. I sat in his lap while he wheeled me around his apartment talking about peace and showing me his artwork and photographs. I never forgot how kind and gracious he was with this little kid haphazardly filming everything.

As little kids we gain this kind of emotional intelligence and understanding about other people and the world around us through stories. Being so young and exposed to people like Ron Kovic, Joann Mayes, Kathy Elton (Creative Visions Foundation) kind of planted this seed in my head that we’re all connected and that we’re all family and that, yes, we CAN make a difference in the world around us.

As a very young environmentalist, you interviewed stars and well-known scientists such as Leonardo DiCaprio and Jean-Michel Cousteau. Are adults more open to children?
I think people are open to children and talking about the world in a more honest and open way because that’s how children look at the world. Naturally. We ask questions, we are curious. We look at the world around us without bias. When I was interviewing Jean-Michel, I was thirteen and he told me: “I have grown up on the species called adults. I only talk to young people because I can have a meaningful conversation with them, and I don’t have to go through the ritual of flirtation that basically kills their willingness to open up and let themselves be vulnerable and emotional.”

Where have you traveled as an environmental filmmaker?
I’ve been to youth conferences in Slovakia, the Czech Republic, the Netherlands, New York and Japan. I’ve traveled to agricultural communities in Nepal, South America and Northern Alberta. When you follow the story of climate change, you follow the story of how our world is changing and how we, as people, are changing. It’s a global issue. Sometimes it affects one nation more than others, but eventually we’re all going to be affected.

Was the COP in Copenhagen in 2009 a turning point for you?
Copenhagen was being touted as a huge moment. World leaders would finally come together and create a fair, ambitious, and binding deal that would lead all of humanity into a more sustainable and fair world. This was the story that was being sold by corporations like Coca-Cola with their “Hopscotch – One Hop Bottle of Hope” campaign. It lived everywhere. It felt like: “Wow, maybe this really is the moment. Maybe we can get everything that we’ve been fighting for.” There was a lot of momentum building towards COP15 – and then the bubble of decision burst.

Did you expect a policy change?
It shouldn’t have been a surprise that governments found it difficult to work together. And it shouldn’t have been a surprise that they were digging in and putting their own national interests ahead of moving together for the global community. But it really was devastating. You look at the science and you look at anecdotal evidence and it’s saying very clearly, with a loud voice, that we have a very small window of opportunity to change the way we live with each other and the planet in order to adapt to climate change. We’re now gotten to the point where we can’t reverse climate change, but we can still lessen its effect. We can still adapt in a way that is sustainable and efficient and that will ensure our survival. It’s cutting it very close, though.

Do you think that the warnings were heard?
Seven years ago scientists were saying that we have maybe five to ten or fifteen years at most to do something, now, seven years later, a lot of people are getting to the point where they’re wondering whether we can trust this system or not, whether we can trust the UN Climate Change Conferences, because they told us seven years ago that it was all going to happen, but now it’s seven years later and they’re saying the same thing. For me, and I think for a lot of other people too, we’ve come to the point in our thinking of “Okay, we gotta give you this opportunity. It’s either all gonna happen here or it’s gonna be going to another Copenhagen and then... we’re gonna have to find another way to do this.” I’m 23 years old, they’ve already been speaking all my life, it’s unacceptable to not have a deal already.

What is the essence of this experience?
Copenhagen was inspiring, but frankly, we can’t let it happen again. It’s a brutal reminder of the ticking clock of climate change, and it hopefully shows that we can do better. I was just watching a video clip of the Filipino negotiators at COP19, not too long after super typhoon Haiyan. A delegate broke down in his address to the conference members and delegates and was saying: “If not us, then who? If not now, then when? If not here, then where? What my country is going through due to this climate-related event is madness. The climate crisis is madness. We can stop this madness. It is the 19th COP but we might as well stop counting because my country refuses to accept that a COP30 or a COP40 will be needed to solve climate change”. That was two years ago.

Do you still have any hopes for the COP21?
You have to have hope or you’ll go crazy. I am cautiously optimistic about COP21 because there is a part of me that says “There’s still a chance” and you take it with the idea that maybe everything could work out and we can finally start on this course to change how we live. But I’m not looking at it as the only solution.

When will your first feature-length film An Inconvenient Youth be shown?
I’ve been making it since I was fifteen and it ended up taking over my life a bit. My team and I are hoping to premiere the full film next summer in May at COP21. I’m going to show a 30-minute version that includes the journey of the last seven years, but also the most recent trip to Northern Alberta where the tar sands industry is located. It’s home to the world’s largest industrial project on Earth. A lot of climate activists are looking at it as a climate bomb – that the carbon from the oil sands is released, then we would have no hope of adapting.

Has your film been growing in step with the climate crisis?
Seven years ago scientists were saying that we have maybe five to ten or fifteen years at most to do something, now, seven years later, a lot of people are getting to the point where they’re wondering whether we can trust this system or not. I think the momentum building towards COP15 was the moment. Maybe we can get everything that we’ve been fighting for. There was a lot of momentum building towards COP15 – and then the bubble of decision burst.

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**Famous Hollywood star, politician, and environmentalist Arnold Schwarzenegger** launched the nonprofit environmental organization R20. Its mission is to help subnational governments around the world develop low-carbon and climate-resilient economic development projects.

### What are the biggest obstacles and challenges to fighting climate change?

I believe that if we want to fight climate change, we need to take action. **It’s important to start with local action that matches our vision,** and I believe we need to be talking about things that matter to people.

We should look at this like a four-legged stool; right now we’re using a one-legged stool. A one-legged stool is unstable and unbalanced. A four-legged stool is strong. The first leg is jobs. **Who can be against this?** The second leg is national security. For decades, industrialized democracies have been in a terrible position of having to purchase foreign energy, sending vast amounts of money outside their borders. A green and sustainable energy future would end this dependence and give us energy freedom. The third leg is health. Pollution kills. One study by Cornell University concluded that a staggering 40% of deaths worldwide are caused by water, air, and soil pollution. Why not suppress or protect the streets?! Because we’re failing to communicate — it’s our job to get that message out. And the fourth leg, of course, is climate change. You can have the best project in the world, but if you don’t promote it and market it the right way, no one will buy it. You have nothing.

The R20 addresses all four legs of the stool. **In partnership with the foundation and investment community,** the R20 is proving to be the driving force to take full advantage of new technologies in order to strengthen local economies, improve public health, create new green jobs, lower greenhouse gas emissions, and reduce our energy consumption.

### What impact can the film and media industry make?

You know I’m a huge fan of the film industry! And I believe that the film and media industry can make a huge impact. **Now in the age of social media, messages can be spread throughout the world — videos can go viral and reach people in all four corners of the Earth.**

Through films, television, and all media outlets, we must continue to deliver the message that solutions are out there and are happening now. **We have to make it attractive for people to take action.** Movies like Avatar, The Day After Tomorrow, and documentaries like Years of Living Dangerously, which I was proud to be a part of, have been very popular, reaching and inspiring millions of people. And I believe films in particular can rally inspire and make people want to take action. It’s great to see some of my film-industry friends working with climate-related organizations to push those messages forward.

### What approach is your organization R20-Regions of Climate Action taking?

R20’s mission is to promote and implement low-carbon projects at the subnational level that are designed to produce local economic and environmental benefits in the form of: reduced energy consumption and greenhouse gas emissions; strong local economies; improved public health; and new green jobs. Thanks to its members, partners, and observers, the R20’s activities connect more than 600 subnational and local governments around the world in order to create clean energy projects that are effective in protecting the environment and the health of our people. The brilliant thing about R20 and what differentiates us from other organizations is that we are a coalition made up of governments, finance organizations, NGOs, academia, clean energy developers, and business. This allows us to develop a truly integrated action plan, to develop a low carbon, green economy everywhere.

R20 teaches regional governments about the different technologies that are available and connects them to the right companies. And we are aware of the fact that it isn’t just about the know-how, it’s also about finance. There is tremendous opportunity for foundations, philanthropists, social/impact investors, and banks to be a part of a real solution by joining this unprecedented group of partners.

The R20 is in a way a matchmaker—you bring the investment capital or grant funding and we connect you to a willing government and technology partners that can successfully implement low-carbon projects. I believe this is an approach that could be the catalyst for real change. Imagine removing the barriers to finally bringing finance into the picture and you will see the rapid deployment of clean-energy projects that will improve the global economy, lower emissions, and provide new jobs. The government members of the R20 are eager to open the door for investment in order to facilitate both the government and investors come up with a low-risk, win-win deal. This project is going to increase the energy supply of the whole country by 10%, so we’re very happy to have been able to help make that happen.

This is going to enable us to embark on a huge initiative to deploy 1 GW of renewable energy across West and Central Africa.

### Do you expect any policy changes to result from COP21?

I have great faith in the outcome of the Paris Summit. I believe that we came out of the Copenhagen summit learning valuable lessons about what not to do, and as I’ve noted previously, we learned that taking action regardless of the negotiations is the only path forward.

Of course, most promising is the ongoing cooperation that was launched at a summit meeting held in 2014 where an historic accord was sealed by President Obama and President Xi Jinping, who both pledged to enact policies to cut emissions significantly. President Obama pledged that the United States reduce carbon emissions up to 28% by 2025, while President Xi vowed that China would halt its emissions growth by 2030. That announcement was a fantastic breakthrough after decades of deadlock on efforts to forge an effective global accord on climate change. Then, as a follow-up in September of this year, President Obama’s top climate change negotiator met with his Chinese counterpart to announce joint actions by cities, states, and provinces in both countries to reduce greenhouse gas emissions. These developments make me very hopeful that by continuing this level of cooperation we will have a positive and possibly unprecedented outcome at COP21.

Finally, I’m most confident because of the leadership of UN Secretary General Ban Ki-Moon. He is a tremendous leader and visionary and is deeply committed to a positive outcome at COP21. He recently remarked that an agreement in Paris “must mark a decisive and irreversible turning point in the world’s collective response to the climate challenge,” I believe that will succeed.
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<thead>
<tr>
<th>A</th>
<th>Awareness</th>
<th>is a necessary condition for any green action</th>
<th>Photo: istkador/33/pixabay.de</th>
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<tr>
<td>B</td>
<td>Best Practices</td>
<td>are the tools and strategies that may be adopted by any production in order to become more sustainable</td>
<td>Photo: FFNGH</td>
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<td>C</td>
<td>Carbon Calculator</td>
<td>as, for example, the Carbon Clap by Ecoprod, an Excel tool used to measure the carbon impact of an action</td>
<td>Photo: Ecoprod</td>
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<td>D</td>
<td>Dispenser</td>
<td>for water is a practical solution on film sets to substitute for plastic bottles</td>
<td>Photo: NikO Tavernese</td>
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<td>E</td>
<td>Energy efficiency</td>
<td>is a key principle that must be applied during film production because energy consumption is one of the biggest sources of carbon emissions</td>
<td>Photo: Rainer Sudm/pixabay.de</td>
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<td>F</td>
<td>Forest Stewardship Council (FSC)</td>
<td>is the certification agency responsible for granting a seal of approval to sustainably produced wood and wood products</td>
<td>Photo: Erich Westendarp/pixabay.de</td>
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<td>G</td>
<td>Grid, drawing energy from the electrical power grid is more environmentally friendly than using a diesel-powered generator</td>
<td>Photo: Egon Hirsch/pixabay.de</td>
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<td>H</td>
<td>Hybrid cars</td>
<td>lower the carbon footprint of automobiles</td>
<td>Photo: Ford</td>
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<td>I</td>
<td>Innovative ideas</td>
<td>and incentives can inspire the cast and crew to increase their environmentally friendly efforts</td>
<td>Photo: Grand Parc – Bordeaux, France, CC-BY-SA, <a href="http://flic.kr/p/eaGyfE8">http://flic.kr/p/eaGyfE8</a></td>
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<td>J</td>
<td>Junk, i.e., metal, carpet, polystyrene, pallet wrap, sucked, and non-rechargeable batteries are often recyclable</td>
<td>Photo: Sanitas Film</td>
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<td>K</td>
<td>“K-cups”, which are used in modern coffee machines are a no-no for any sustainable production. Please don’t use them</td>
<td>Uncredited photo</td>
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<td>L</td>
<td>LED lights</td>
<td>are much more energy efficient than incandescent. Their cost is offset by energy savings, so it pays off in the long run to use them</td>
<td>Photo: Trineachaeq</td>
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<td>M</td>
<td>Management</td>
<td>by an Eco Supervisor is crucial for a production’s sustainability efforts from prep through wrap, so that solutions may be found and implemented in all departments</td>
<td>Photo: Niko Tavernese</td>
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<tr>
<td>N</td>
<td>Natural cosmetics</td>
<td>should provide ingredient transparency in order to make sure that the products are chemical-free and have not been tested on animals</td>
<td>Photo: JPW Peters/pixabay.de</td>
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<td>O</td>
<td>Organic food</td>
<td>is healthy and can be a real improvement for catering</td>
<td>Photo: Helene Souza/pixabay.de</td>
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<tr>
<td>P</td>
<td>Paper distribution</td>
<td>should essentially be eliminated at any production. Schedules, call sheets, production reports, crew and contact lists can be put in dropbox folders and distributed via email</td>
<td>Photo: Celeste Leder/pixabay.de</td>
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<td>Q</td>
<td>Q-radi digital heater, a combined multi-processor / electric heater. Instead of cooling the computer’s server, its heat is used to heat a room</td>
<td>Photo: Guernet Computing</td>
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<td>R</td>
<td>Rechargeable battery systems save a fair amount of money as well as hundreds of batteries during production</td>
<td>Photo: Niki Tavernese</td>
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<td>S</td>
<td>Solar-powered generators</td>
<td>are a smart and alten solution to meet off-grid power needs of a production</td>
<td>Photo: NikO Tavernese</td>
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<td>T</td>
<td>Transportation by train</td>
<td>instead of planes is one of the key elements of Best Practices; it minimizes carbon emissions</td>
<td>Photo: Erich Westendarp/pixabay.de</td>
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<td>U</td>
<td>Use laptops</td>
<td>instead of desktops because they are more energy-efficient and shut down all devices over-night: Nearly 75 % of the electricity used by electronics is consumed while in standby mode</td>
<td>Photo: Dean</td>
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<td>V</td>
<td>Vegetarian dishes</td>
<td>on the menu are a delicious alternative. According to scientific research, a plant-based diet with grains products, vegetables, and fruits has health as well as environmental benefits</td>
<td>Photo: Peter Pleischl/pixabay.de</td>
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<td>W</td>
<td>Waste separation</td>
<td>is essential for the environment and it’s easy to do. It can even recoup its cost in some countries</td>
<td>Photo: Niko Tavernese</td>
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<td>X</td>
<td>X-Men: Days of Future Past, a 2014 American superhero film based on the fictional X-Men characters who appear in Marvel Comics, was sustainably produced by 20th Century Fox</td>
<td>Photo: 20th Century Fox</td>
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<td>Y</td>
<td>Yes Men, the rom de guerre of two New York filmmakers who create provocative media actions in order to raise awareness, such as their film The Yes Men Save World</td>
<td>Photo: The Yes Men</td>
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<td>Z</td>
<td>Zero carbon impact</td>
<td>can balance a production’s carbon impact by participation in a sustainable project, such as reforestation</td>
<td>Photo: Forest Carbon Group</td>
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