

French and Australian experts on solving the world's sustainability challenge

Written by François Raulin, Ingénieur de recherche à l'Institut du développement territorial (IDÉT), Laboratoire Métis EM Normandie, École de Management de Normandie



Still from the French documentary Tomorrow. MOVE MOVIE, FRANCE 2 CINÉMA, MARS FILMS, MELY PRODUCTIONS

The Conversation and the Australian French Embassy presented a panel between French and Australian experts at the University of New South Wales in March, opened by the French Minister for Foreign Affairs and International Development Jean-Marc Ayrault.

In his opening remarks, Ayrault celebrated the signing and coming into force of the 2015 Paris Agreement, under which countries agreed to limit warming to well-below 2° , however he highlighted that more action needs to be taken around the world.

"Some are tempted to slow it down, or worse, to take a step backwards. We can currently see this in the United States.

"Tackling climate change is a democratic fight. Individual actions are like votes: on their own, they seem powerless, but together, they give new meaning to our societies," he said.

The panel discussion included screenings of clips from the French documentary [Tomorrow](#) . View the complete discussion below.

The Conversation asked French and Australian experts what they consider to be the major challenges to overcome in transitioning to a more sustainable world.

Better valuing sustainable development in transport

François Raulin, Researcher, The Territory Development Institute, Normandy Business School

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Since the Earth Summit in Rio de Janeiro in 1992, sustainable development has gradually become a key issue for public policy in many countries. Despite many global efforts - for example - to reduce carbon dioxide emissions into the atmosphere, most small initiatives are being taken at the local level.

Take the example of sustainable mobility in cities. The majority of urban agglomerations have been designed or redeveloped for cars. In order to limit the use of cars, various devices have been put in place, such as the introduction of urban road tolls (for example in Singapore, London and Stockholm), the removal of parking lots in inner city centres, or more recently the [installation of eco stickers \(road tax\) for polluting vehicles in Paris](#)

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In parallel, many French cities have seen a reduction in car use in favour of more sustainable forms of transport. As well as public transport such as trains, buses or trams, bikes and walking are alternative solutions to cars. However, depending on the urban environment, bicycling or walking is not always possible, or is dangerous.

How can these modes of active transport be promoted? Here are three possible solutions:

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First, by promoting their health benefits, including the fight against obesity, the decline in cardiovascular diseases or the preservation of mental health.

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Second, by encouraging their intermodality with other transport system, which would reduce the use of cars over short distances. The development of bike-sharing systems or improved walkability are various solutions proposed to encourage their use in the city.

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Third, by increasing the ground area dedicated to cycling (bike paths) and walking (footpaths) while decreasing that of cars.

Beyond environmental issues, the development of sustainable mobility in cities also improves the quality of life of the inhabitants (less pollution, less noise, and so on) and make it [more attractive, especially among young people](#).

Overcoming inertia in the energy system

Dani Alexander, Research principal, Institute for Sustainable Futures, University of Technology Sydney

Overcoming inertia, both culturally and technologically, will be the key to unlocking our clean energy transition.

Power has been shifting to the energy consumers with the rapid rise of rooftop solar and falling costs of battery storage. However, with this has come discontent with the large electricity businesses that were built in the traditional model of “big energy” to “small consumer”.

As Belgian historian David Van Reybrouck argues in the film Tomorrow, there is an “increasing sense of theft” among consumers, which can drive action against the system such as “going off-grid”. The majority of Australians are ready to move to a renewable energy system despite the political inertia.

Our researchers at the [Institute for Sustainable Futures](#) have investigated the risk of a “death spiral” where, as more people leave the grid, the shared cost of our electricity infrastructure becomes more concentrated among fewer people, leading in turn to yet more people leaving the grid.

Unfortunately, it is often those who are more vulnerable (such as those who cannot afford a personal energy system) that pay the highest price. There are options to improve the way that our energy market works to provide a fairer deal for everyone, but regulatory inertia seems to be strong as well.

But what about technically? Can we move to a renewable energy system without risking the system or soaring electricity bills? Or is a rapid transition irresponsible, as [some in our federal government would have us believe](#)? Can renewables provide the same reliable services?

Moving towards more local generation, such as more rooftop solar, does make managing electricity more complex, for example in keeping network voltage in check. Luckily, renewable technologies have already advanced and have the capability to provide the network support services we need. [Solar panels with storage will be able to moderate voltage at the source of the problem](#). Wind turbines already have the ability to provide the “synthetic” inertia to keep the grid stable – if the market allows and promotes it.

So what we need now is a new momentum. Strong enough to overcome the inertia and fast enough to divert our path away from irreversible climate change.

Working from the ground up

Joachim Claudet, Researcher, CNRS/PSL University

Global change is a major challenge for human societies. It is modifying ecosystems all over the world, hence threatening our wellbeing through alterations to the flow of ecosystem services. However, global change is not affecting societies everywhere in the same way. Global drivers interact with local drivers.

They can combine with local stresses, such as overfishing or land clearing, creating additive or even multiplicative impacts. Understanding and predicting global change impacts thus requires strong knowledge of local social-ecological systems, of human-nature interactions (such as human use of the environment, natural disturbance history).

Global drivers also emerge from local processes. Hence, attempts to minimise the magnitude of global drivers or strategies to mitigate their impacts require local interventions. These can include incentives to modify human uses or adaptive management to foster resilience of social-ecological systems.

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The latter requires a deep understanding of local world views as effective strategies in a place can be culturally inappropriate in another. This is particularly true in some Pacific Island countries – those countries being some of the most vulnerable to climate change – where wellbeing is strongly tied to the connectedness of people and places and where there is no distinction between nature and culture.

Dani Alexander is a member of the Institute for Sustainable Futures (ISF), which undertakes paid sustainability research for a wide range of government, NGO and corporate clients, including energy businesses.

François Raulin and Joachim Claudet do not work for, consult, own shares in or receive funding from any company or organisation that would benefit from this article, and has disclosed no relevant affiliations beyond the academic appointment above.

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