



FROM DREAM ISLANDS TO APOCALYPSE ISLANDS¹

Françoise Besson

Abstract

Islands have always been places arousing dreams and phantasms but also all forms of fears. Very present in literature and especially adventure literature (with Jules Verne or Daniel Defoe among the most famous creators of imaginary islands or imaginary stories inspired by real islands), they are often places of dreams for tourists. Yet climate change modifies the perception of islands and makes us aware that it has a deep impact on lots of geographical places and especially on islands. Starting with some literary visions of islands in the past this essay would like to concentrate on islands or shorelines nowadays as the places of vulnerability (such as Marshall Islands; Kerala, islands in Sudan or Tuvalu, Tokelau and Kiribati archipelagoes among others). This will also be the opportunity to show some solutions found by communities living on these islands and also the paradox of the construction of some artificial islands meant for rich tourists in some special places.

Resumo

As ilhas sempre foram lugares que despertaram sonhos e fantasias, mas também todo tipo de medo. Muito presentes na literatura, especialmente na literatura de aventura (com Júlio Verne e Daniel Defoe entre os mais famosos criadores de ilhas imaginárias ou histórias imaginárias inspiradas em ilhas reais), elas são frequentemente lugares de sonho para turistas. No entanto, as mudanças climáticas modificam a percepção das ilhas e nos fazem perceber o profundo impacto que elas têm em diversos lugares geográficos, principalmente nas ilhas. Partindo de algumas visões literárias das ilhas no passado, este ensaio pretende se concentrar nas ilhas ou litorais da atualidade como lugares vulneráveis (como as Ilhas Marshall, Kerala, ilhas no Sudão ou os arquipélagos de Tuvalu, Tokelau e Kiribati, entre outros). Esta será também uma oportunidade para mostrar algumas soluções encontradas por comunidades que vivem nessas ilhas, bem como o paradoxo da construção de algumas ilhas artificiais destinadas a turistas ricos em locais específicos.

¹ This text has been presented at ASLE BRAZIL Conference on 14 August 2025 (as a videoconference).

1. Dream islands in our childhood books

My first meetings with islands were literary ones and the first one was Jules Verne's mysterious island. Like lots of children Verne's novels made me dream and even led me to ask regularly the question : "if I had one object or one book to take on a deserted island what would it be ?" More than a frightening unknown space, it was for me an unknown space of dreams that could allow me to find myself. Meanwhile I went on dreaming on real islands for what they represented in my life: Murano island near Venice as I discovered it with my parents; Lérins islands on the Riviera near Cannes as it was a place of dream and love for my parents; L'Île aux Coudres in Canada around which I walked one day to discover, around its twenty-eight kilometers, its various ecosystems, from seaside vegetation—as it was on the Saint Lawrence river that is a salted river—to forests and ponds. "My" real islands were both islands of love and islands of conscience. I'll always keep the dream of living a few days on a wild island with a friend or alone to know the world and myself.² But now islands are no longer islands of dreams but either islands of unconsciousness (like the artificial islands built in some countries for the sake of money), or islands as warning signs of the vulnerability of the world.

Many of us have lived moments of escape and freedom while travelling in literature and going to imaginary islands with Daniel Defoe's Robinson Crusoe, Jules Verne's Captain Nemo on the *Mysterious Island* or Robert Louis Stevenson's *Treasure Island*. Jules Verne sends his Northern escapees from the American Civil War to "the mysterious island" where Captain Nemo has built his Nautilus. So, the mysterious island is first the Nautilus, which travellers can find in a house in the French city of Amiens³ (where Jules Verne lived thirty-four years). Years ago the Nautilus in his house was in the form of a bookshelf. "What about his inspiration? He finds it in his huge library, 12 000 books, among which a (small) part is still there beside his travel notebooks and his earth globe"⁴ That literary island from the Pacific Ocean is the space of Verne's imaginary. Yet, the island is the necessary stage, the freedom of the depths of the

² I have written a few texts linked with islands: "La Quête de l'île et le récit de voyage", *Mythes, croyances et religions*, Université d'Avignon et des Pays du Vaucluse, Cahier 17 : 1999, 59-79.. "L'île mouvante de Caliban : l'île théâtrale et l'île autochtone, deux mises en scène de *La Tempête* par Robert Lepage," in *Caliban* n° 52, "Caliban et ses avatars", Décembre 2014, 53-74. In 2005 I wrote a collection of poems entitled *Mystérieuses îles*.

³ See "Amiens : Le Nautilus s'installe au musée" <https://www.weo.fr/video/amiens-le-nautilus-sinstalle-au-musee/> accessed on 7 January 2026.

⁴ "Son inspiration ? Il la trouve dans son immense bibliothèque, 12 000 livres, dont une (petite) partie est toujours là, à côté de ses carnets de voyage et son globe terrestre." "À Amiens, Jules Verne vous reçoit *chez lui*" <https://www.plusaunord.com/jules-verne/> accessed on 7 January 2026.

infinite cannot exist without the yard where the ship that will lead the traveller under the seas will be built. The island welcomes the castaways but the fire of the earth destroys it and sends them to the sea again, like Atlantis. Yet, once the island is destroyed, an isolated rock will be left, an island again, on which the shipwreck victims will be able to wait for those who will rescue them and who have been mysteriously sent by Captain Nemo. The island generates mystery, as was so well suggested by writers such as Jules Verne and his mysterious island or Robert Louis Stevenson and his Treasure Island.

Why do humans love islands so much? Those isolated spaces of land, those solid points in the middle of the fluid moving ocean, make vegetal explosions emerge from the blue infinite; bunches of green palms or grey rocks or clouds emerge from transparency like a message of hope. It is probably that message that, for thousands of years, humans have always tried to decipher. The island, everywhere in the world is the traveller's gigantic Rosetta Stone, an enigmatic narrative and a solution to the enigma that the traveller is going to decipher beyond time. It is his message in a bottle tossed for thousands of years and preciously preserved by the sea. Literary islands are like the imaginary object of a quest that each person has in him or her.

All islands have everyone's ideal in their ideal space. More than eight billion Robinson Crusoes look for the island they feel deep within themselves without managing to reach it.

Michel Serres considers that Joyce and Verne meet around the island that will bring them to Ulysses. Why are the great tales of mankind's history travel tales that make an island the heart of the world? Ulysses, coming from Ithaca, returns to it after an odysseus leading him from island to island; from the Cyclopes' country that is an island (Sicily) to the island of Aeolia, from the wandering rocks of Charybd and Scylla to Calypso island and then the Phaeacians' island, Ulysses' travel is a quest that seems to be able to exist only thanks to islands. Roots or obstacles, inhabited islands or mere rocks having become linguistic metaphors, islands are steps on the oceans, which are transmitted to us from Homer to James Joyce. Michel Serres writes:

Jules Verne has written the Odyssey or Joyce's Ulysses in eighty days or eighty volumes. Each journey is a piece of Homer's cycle, the expansion of one hour in Dublin. The Greek model is given for an interior sea and a finite knowledge. Verne extends it to the closed world of the 19th century when all possible meetings have just been ended and been achieved, by travellers and geographers [...]. Verne ends Homer and Joyce reduces him. [...] But Verne had reduced a whole world into an island. Joyce still reduces that utopia microcosm and gives it back to human space, really lived by his contemporaries: the closed city, the ghetto city and the closed soul from which nobody can escape. The world is either the Mediterranean, plus its known or unknown

fringes, or the elliptical universe, the Earth, its womb and its planetary family (or metaphorically, the island, the ship, the raft, or the city that is insular indeed, cosmic and Mediterranean⁵.

Captain Nemo who "hates continents and islands" ⁶ builds his *Nautilus* in the cave of an island and makes his vision of the world an itinerary from island to island. A landscape entirely made of islands leads us to the bottom of our abysses, lit up by madrepores perhaps teaching us to respect the earth carrying us:

Yet, still carried by this *Nautilus*, where we live as if isolated, on 11 December, we made acquaintance with Pomotou Archipelago, [...] spreading on a space of five hundred leagues from Ducie Island to Lazareff Island. This archipelago is constituted of [...] around sixty groups of islands, among which you can note the Gambier group, on which France imposed its protectorate. Those islands are coralligenous. A slow but continuous rising, caused by the work of polyps, will link them to one another one day. Then that new island will be linked later to the neighboring archipelagos, and a fifth continent will spread from New-Zealand and New Caledonia to the Marquesas Islands. [...] Captain Nemo coldly answered me: "It's not new continents that the Earth needs but new men" (Verne 201-202).⁷

Isolated on an imaginary vessel the sailors of Verne's imagination move from island to island in a vessel that is their own island ("isolated" and "isle" have the same root). Isolated means "separated like an island"⁸. The submarine is a closed space that can be assimilated to an island. The situation of every solitary or isolated person in general assimilates him/her to an

⁵ "Jules Verne a écrit l'*Odyssée ou l'Ulysse de Joyce* en quatre vingts journées ou quatre-vingts volumes. Chaque voyage est un morceau du cycle homérique, le déploiement d'une heure à Dublin. Le modèle grec est donné pour la mer intérieure et un savoir fmi. Verne l'étend au monde clos du XIXe siècle, où vient de s'achever la totalité des rencontres possibles, par voyageurs et géographes, [...]. Verne finit Homère et Joyce le réduit. [...] Mais Verne avait réduit tout le monde en une île. Ce microcosme utopique, Joyce le réduit encore et le rend à l'espace humain, réellement vécu par ses contemporains : la ville close, la ville ghetto et l'âme fermée dont nul ne peut sortir. Le monde, c'est ou la Méditerranée, plus ses franges connues et inconnues, ou l'univers elliptique, la Terre, ses entrailles et sa famille planétaire (ou, par image, l'île, le bateau, le radeauJ, ou la cité qui est bien insulaire, cosmique et méditerranéenne". Michel Serres. *Jouvences sur Jules Verne*, Les Editions de Minuit, 1991, 64-65. Translation mine.

⁶"a horreur des continents et des îles" . Jules Verne. *Vingt mille lieues sous les mers*, Paris : Garnier-Flammarion, 1977 , 171. Translation mine. .

⁷ "Cependant, toujours entraînés par ce *Nautilus*, où nous vivions comme isolés, le 11 décembre, nous eûmes connaissance de l' Archipel de Pomotou, ancien "groupe dangereux" de Bougainville, qui s'étend sur un espace de cinq cents lieues de l'est-sud-est à l'ouest-nord-ouest, entre 13° 30' et 23° 50' de latitude sud et 125° 30' et 151° 30' de longitude ouest depuis l'île Ducie jusqu'à l'île Lazareff. Cet archipel couvre une superficie de trois cent soixante dix lieues carrées, et il est formné d'une soixantaine de groupes d'îles, parmi lesquels on remarque le groupe Gambier, auquel la France a imposé son protectorat. Ces îles sont coralligènes. Un soulèvement lent, mais continu, provoqué par le travail des polypes, les reliera un jour entre elles. Puis cette nouvelle île se soudera plus tard aux archipels voisins, et un cinquième continent s'étendra depuis la Nouvelle-Zélande et la Nouvelle Calédonie jusqu'aux Marquises. Le jour où je développai cette théorie devant le capitaine Nemo, il me répondit froidement ». Ce ne sont. pas de nouveaux continents qu'il faut à la terre, mais de nouveaux hommes » (Verne *Vingt mille lieues sous les mers*, 201-202)

My translation. The abundance of words belonging to the lexical field of insular lands is significant.

⁸ Jacqueline Picoche. *Dictionnaire étymologique du français*, Paris : Dictionnaires Le Robert, 1994, 295.

islander. Solitude is like an image of the island; every being becomes, at one moment or another, a Robinson Crusoe who will have to confront existence facing himself/herself on his/her deserted island. The multiplication of islands in Jules Verne's novel speaks about human condition. The Nautilus sailed to Clermont-Tonnerre Island and the narrator studies "that madreporic system that generated the islands of this ocean":

Madrepores, which must not be mistaken for corals, have a tissu covered with a calcareous crust, [he quotes M. Milne-Edwards's classification]. Billions of these tiny animalcules secreting that polypier dream at the bottom of their cells. They are calcareous deposits that become rocks, reefs, islets and isles.⁹.

The scientific explanation of the relationship between madrépores and islands looks like a call for reason trying to understand things, looking for the future of that multitude of islands in an animal past explaining things but not solving them. Nemo, that imaginary capitan with the name of "Nobody", like Ulysses¹⁰, to deceive the Cyclop, gives an important clue. What is necessary to the Earth is: "New humans." Nemo proposes a new "Terra incognita" and the novel filled with islands is a paper lighthouse guiding us to our interior worlds, deserted islands of bottomless oceans where we always look for the way. Jules Verne who was a visionary in so many fields may have seen in the system of islands born from madrepores and in Nemo's small phrase a solution not in a spirit of conquest ("new continents") but a questioning of our behaviors to the Earth ("new humans"). These literary islands that fed our childhood dreams are perhaps not only dream islands but islands awakening our consciences and showing us the connection between all elements.

Can we ever approach the island? Can we really understand the island? What is it but a stage? Towards the truth? Perhaps the rewriting of the Prodigal Son parable by Théodore Monod (a French naturalist spending all his life defending nature) answers the question. The Prodigal Son, on his island, remembers his father's footsteps, the scar in the footsteps, recognizable among all steps. There are no more footsteps on the island. So he walks towards the sea, with outstretched arms and clasped hands, his hands becoming now the only island. Théodore Monod writes about the son's questioning while he wonders if he can go back home.

⁹ "Les madrépores, qu'il faut se garder de confondre avec les coraux, ont un tissu revêtu d'un encroûtement calcaire, et les modifications de sa structure ont amené M. Milne-Edwards, mon illustre maître, à les classer en cinq sections. Les petits animalcules qui sécrètent ce polypier rêvent par milliards au fond de leurs cellules. Ce sont des dépôts calcaires qui deviennent rochers, récifs, îlots, îles" (Verne 201-202). Ma traduction.

¹⁰ Simone Vierne noted the echo between the two characters through their names in her introduction to Jules Verne's *Vingt mille lieues sous les mers*, Paris : Garnier-Flammarion, 1977. .

But can he materially since he has burnt or given his boat?¹¹ A boat he had build to escape "the island of the merry debauchery" to reach "the fortunate island." Théodore Monod, twenty seven years old in those days, at the heart of the desert, rewrites the biblical parable and reinterprets the island. At 27, in the middle of the desert where he tirelessly searches for a plant, he sees the meaning of the island and listens to the sound of the waves in his interior rewriting.

2. Mythical and spiritual islands

The island is a spiritual stage perhaps because it is a stage in a real journey. It is a spiritual symbol in nearly all the mythologies of the world: white Island or green island, Celtic island or Greek island, the island has been associated with the spiritual quest for centuries and it remains the image of the quest in every human being's everyday life. We can also think about some Native American myths of Creation: for example the creation of the World for Hurons and others was made possible by animals among whom a turtle that constituted the basis of what was to become the Great Turtle Island, that is the American continent, that is the world.¹²

White islands can be found in the whole world: what is the common point between the British Isles, Atlantis, Thule Island and Awa in Japan? Real or mythical islands often are white islands. White islands that will reveal connections between regions of the world as distant as Syria and the kingdom of Toltecs. Hyperborean *Tula* and Greek *Thule* that meet through their names, from Aztlan Island, thus the Atlantis. The mythical map of the world is drawn in a name and a color. Jean Chevalier and Alain Gheerbrant show that strange relationship revealing the mysterious fate of islands.¹³ The island is often a heavenly space, and its situation in the middle of the water, far from the dark realities of the world may explain its association with paradise in lots of cultures: in Moslim culture, the Earthly Paradise is situated on Ceylan Island; In Greek mythology, Zeus is native from Minos Island. There are also heavenly islands in Chinese myths; in Arthurian Legend and the quest for the Grail, it is an island, Monsalvat, which is the central island, while the Irish gods come from the four islands North of the world and which

¹¹ Théodore Monod. *Les carnets de Théodore Monod* (Arhet, 27 juillet 1929), Paris : Le Pré aux Clercs, 1997, 135-139.

¹² A legend read in the Huron village of Wendake in Quebec (Canada) and in the book by David Hurst Thomas, Jay Miller, Richard White, Peter Nabokov, Philip J. Deloria *The Native Americans (An Illustrated History)*, JG Press, 2001 [*Les Indiens d'Amérique*, éd. du Rocher, 1994, for the French translation].

¹³ See Jean Chevalier et Alain Gheerbrant. *Dictionnaire des symboles*, Paris : Robert Laffont, 1982.

the Celts represent: "the other world and the marvelous world beyond of Irish sailors in the shape of islands situated to the West or the North of the World" (Chevalier, 519).

So islands live in all the cultures of the world as ideal places so beautiful and perfect that they are assimilated with heaven while literature makes them mysterious places both arousing human fears and human hopes. In all cases they are the places of quests.

Climate change gradually transforms the dream islands of our readings into apocalyptic islands as islands are most vulnerable. Real islands make us return into a reality in which islands have become the warning signs of a world threatened by climate change. But there're also another kind of islands arousing some rich people's fantasms.

3. Luxury islands for tourists or islands for industrial investment

Ironically enough the name of an island that made millions of children dream has been given to an artificial island in San Francisco. Treasure Island is a man-made island in San Francisco Bay. It was built between 1936 and 1937 for the Golden Gate International Exposition. It was originally intended to become a second airport for San Francisco but with war approaching the Navy moved there and it became a naval base. It became the setting of several films among which *Indiana Jones and the Last Crusade* for the Berlin airport scene. The island was highly contaminated (2007 Cosco Busan oil spill just a few hundred yards from Treasure Island). A cleaning process was started and it was sold to the city as part of a development project.

For the sake of money, some people decided to create artificial islands for rich tourists. For example Sindalah in the Red Sea in Saudi Arabia is the first luxury island. (9 million sq ft)¹⁴: a "grand opening" party took place in October 2024. Its cost was nearly \$4 billion, to "establish a strong tourism industry and is expected to create 3,500 jobs. designed by Luca Dini who sought it to be akin to a village of luxury resorts. About 40,000 workers worked on the Sindalah project."¹⁵

We can also think about Oxagon, which is a floating industrial city.¹⁶ It is the most worrying project. That project of a floating industrial city would shelter a harbor an entirely

¹⁴ <https://en.wikipedia.org/wiki/Sindalah> Accessed on 7 January 2026.

¹⁵ <https://en.wikipedia.org/wiki/Sindalah> and "NEOM, Marriott International announce new Saudi luxury apartments in Sindalah". *Arabian Business*. 11 January 2024. Retrieved 14 February 2024.

¹⁶"Oxagon : un projet de cité flottante industrielle très controversé" by Yohan Demeure. 24 novembre 2023. [Yohan Demeure https://sciencepost.fr/oxagon-cite-flottante-tres-controversee/](https://sciencepost.fr/oxagon-cite-flottante-tres-controversee/) Accessed on 7 January 2026.

automated ecosystem.

The city was to welcome its first inhabitants as soon as 2024. As is explained on the platform dedicated to that project, Oxagon will have to integrate an industrial center with factories and spaces devoted to research and development, an innovation center, a harbor, a logistic hub as well as a supplier chain and a city.

But this is the silver lining, something that is presented as bringing wealth and money. Yet the human side is not very present in this presentation and it is not astonishing. An article entitled "Saudi Arabia's Neom: A prestigious project with a dark side" reveals that for this project to become real, people have been displaced and what is more, some members of the displaced tribe have been condemned: one has been killed and three of them were sentenced to death and others have been condemned to 50 year jail sentences. So what is presented as a highly modern island created for the best is built on blood and brought about the destruction of the tribe who lived there.¹⁷

According to a recent report by the Office of the United Nations High Commissioner for Human Rights (OHCHR) people from the Howeitat tribe who live in the region earmarked for the city have been displaced and their homes demolished without adequate compensation. What is more, one Howeitat man has been killed and the death sentences of three further tribe members have been confirmed, while three more have been handed 50-year jail sentences on terrorism charges.

"But the glossy brochures don't show that this is a city being built on forcible evictions, state violence and death sentences," Jeed Basyouni, Middle East director of the human rights organization Reprieve, told DW. For her, Neom epitomizes the "gulf between Mohammed bin Salman's professed 'vision' of Saudi Arabia and the repressive reality of his rule."¹⁸

Apart from such extreme cases of construction of islands meaning lots of human destructions, existing islands are threatened by climate change and are the markers of the vulnerability of the Earth while the increase of temperatures bringing about the melting of ices and thus the rising of the oceans threatens the most vulnerable places: coasts and islands.¹⁹

4. Islands as the landscape of vulnerability

4.1. "The vulnerable arts" in India

¹⁷ See Jennifer Holleis | Kersten Knipp. "Saudi Arabia's Neom: A prestigious project with a dark side." <https://www.dw.com/en/saudi-arabias-neom-a-prestigious-project-with-a-dark-side/a-65664704> Accessed on 7 January 2026.

¹⁸ <https://www.dw.com/en/saudi-arabias-neom-a-prestigious-project-with-a-dark-side/a-65664704> Accessed on 7 January 2026.

¹⁹ While I was giving the lecture for the ASLE conference in Brazil from my home city of Toulouse in mid August, the temperature in Toulouse and other parts of France was 42°C. (107.6°F).

On the Arithmetic of Compassion website V.K. Karthika published an article on "Photographing Vulnerability: Trans-scalar Articulations of Precarity from the Shorelines of Kerala."²⁰ Scott Slovic mentioned this article and showed us a poignant photo taken from it.²¹ In this article (prefaced by Scott Slovic), V.K. Karthika shows a photo series by K.R. Sunil, a photographer from Kodungallur. The photographer took pictures of artists photographed with their feet and houses in the water after various floods. Photography is an art showing reality and striking viewers by showing the vulnerability of these artists because of climate change causing the rising of waters threatening their island. The artists photographed are Chavittu Nadakam artists. Chavittu Nadakam is a "form of theatre originating in Kerala state in India, associated with the Latin Christians of the region. It is noted for its flamboyant make-up discipline, elaborate costuming and detail to gesture and body movements. This art form highly resembles European opera. Traditionally performed with only drums and vocals, it is today accompanied by modern instruments and represents a fusion of Indian, Christian and European influences." The name "means a play that emphasizes step" (in Malayalam).²² By showing the artists in their beautiful theatre costumes and threatened by rising water, the photographer shows us the threat on this particular community is the threat on the whole world and on arts and artists. Karthika writes:

"The Chief of Disaster Risk Reduction in the UN Environment Programme Murali Thummarukudy points out that the climate changes result in rising sea levels and will certainly erase these artists' habitats (and of course the houses of others who live on the shorelines) very soon. The photographs clearly communicate this reality to the viewing public. If we as spectators or readers access the message, how long do we sustain the empathy? When the artist plays with the power of singularity and transacts the vulnerability of a larger social sect, are we going to discourse this further? Instead of discussing an evangelical mission to redeem the art, what we need to do is to discuss the ways in which democratic spaces for performance can be facilitated while we safeguard these artists' ecosystem and their habitats by addressing the larger question of climate change."²³

²⁰ V.K. Karthika. "Photographing Vulnerability: Trans-scalar Articulations of Precarity from the Shorelines of Kerala."<https://www.arithmeticoftcompression.org/blog/2023/4/18/photographing-vulnerability-trans-scalar-articulations-of-precarity-from-the-shorelines-of-kerala> Accessed on 9 January 2026.

²¹ In a lecture Scott Slovic gave in Toulouse (France) at the Académie des Sciences Inscriptions et Belles Lettres de Toulouse, France, entitled "Seeking a Discourse of Environmental Sensitivity: Psychology and Public Engagement in *Voyager pour penser*." He showed a slide of Chavittu Nadakam artist George Vadakkeparambil. Photo & Text credits: K.R. Sunil. Filmed by Jacques Madrènes <https://vimeo.com/933138251/da2e09914b?share=copy>

²² https://en.wikipedia.org/wiki/Chavittu_Nadakam. Accessed on 9 January 2026.

²³ V.K. Karthika. "Photographing Vulnerability: Trans-scalar Articulations of Precarity from the Shorelines of Kerala"<https://www.arithmeticoftcompression.org/blog/2023/4/18/photographing-vulnerability-trans-scalar-articulations-of-precarity-from-the-shorelines-of-kerala> Accessed on 9 January 2026.

Floods in the southern Indian state of Kerala have killed more than 410 people since June 2018 in what local officials said was the worst flooding in 100 years. Many of those who died had been crushed under debris caused by landslides.

One of the artists is George Vadakkeparambil shown here in his beautiful clothes and dignified look while his feet are in water:

73 year old George has acted in 40 Chavittu Nadakams. Despite his ill health he performed on stage till the age of 65. Now he is disheartened that as a passionate artist he has never been recognised by the society. The climate change after the Tsunami of 2004 negatively affected his life and he had to leave his house which gets inundated during the high tides.²⁴

Another photo shows another Chavittu Nadakam artist, T.J. Xavier, and his wife smiling in spite of the water rising:

Xavier lives in an isolated island which is a serene place with canopies and fresh air. But the flood of 2018 inundated his house and he lost all the costumes and props that his ancestors and himself made for Chavittu Nadakam. In the recent years, it is clear that the sea level is rising and most of the time the island is flooded. During the times of flood, Xavier and family takes shelter elsewhere away from the island. Even though he knows that the water level will steadily increase, he is not willing to leave the island and his home which beholds fond memories of his dear ones.²⁵

The three media of theatre, photography and writing are associated to make people aware of the vulnerability of islands.

4.2. The vulnerability of Kiribati archipelagoes

The 20th Plenary Session of the Committee for Development Policy that took place at the United Nations in New York, from 12 to 16 March 2018 published a report entitled "Vulnerability Profile of Kiribati."²⁶ It's a technical report giving the various criteria of vulnerability. A history of natural disasters since 1938 shows the number of natural disasters striking the archipelagoes.

²⁴ V.K. Karthika."Photographing Vulnerability: Trans-scalar Articulations of Precarity from the Shorelines of Kerala" <https://www.arithmeticofcompassion.org/blog/2023/4/18/photographing-vulnerability-trans-scalar-articulations-of-precarity-from-the-shorelines-of-kerala> Accessed on 9 January 2026.

²⁵ V.K. Karthika. "Photographing Vulnerability: Trans-scalar Articulations of Precarity from the Shorelines of Kerala" <https://www.arithmeticofcompassion.org/blog/2023/4/18/photographing-vulnerability-trans-scalar-articulations-of-precarity-from-the-shorelines-of-kerala> Accessed on 9 January 2026.

²⁶ Committee for Development Policy 20th Plenary Session. United Nations.New York, 12-16 March 2018 Conference Room 6 <https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/CDP-PL-2018-6b.pdf> Accessed on 9 January 2026.

If this report studies economic vulnerability in the archipelago, it shows that it depends on natural disasters. If we observe the table on this report,²⁷ we can note that between 1938 and 2008, the archipelago was mostly struck by drought (except for a tropical cyclone in 1978/1979), whereas since 2008, the dominating natural disasters are tropical cyclones and extreme Spring tides that did not appear in the previous period. This change corresponds with climate change and the increasing of extreme meteorological events that were much scarcer in the past (even if they existed).

The fact that that part of the world should be constituted of islands makes it still more vulnerable as at each extreme Spring tide or tropical cyclone, the water rises, thus causing floods .

A social anthropologist who is member of the committee of experts of the Ocean and Climate platform, Guigone Camus, a specialist of Kiribati Archipelago, speaks about the consequences of climate change on people living on islands. She says that the impacts are already very perceptible:

"[The impacts of climate change] are very concrete. The 120 000 inhabitants of these small low islands, situated nearly at the level of the sea, are losing habitable lands because of the erosion of the coasts. The rising water and the storms lead to the flooding of coastal gardens and to the salinisation of the grounds. Which makes the lands more difficult to cultivate and weakens food resources. In a more or less short term, it could also lead to land conflicts as is already the case in Tarawa, the capital of the archipelago. Global warming also weakens the resource in fresh water, a rare commodity. It is available only thanks to an underground brackish water pocket and to the rainwater harvesting. During the period of drought that are stronger and stronger, the renewal of that underground water is not sufficient, which generates some insalubrity of the water, causing lots of diseases."²⁸

If the article says that the ultimate solution would be definitive exile, that "solution" is not conceivable for the inhabitants of the islands. In the short term, some protection walls have been built to protect the islands from high waves. In 2014, the government bought cultivable lands in Fiji. But we can imagine the anxiety of the inhabitants living on grounds that can be flooded regularly and destroy their houses and crops.

²⁷ Table 2. "KIRIBATI: History of natural disasters since 1938"

<https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/CDP-PL-2018-6b.pdf> Accessed on 9 January 2026.

²⁸ Guigone Camus in an interview for the *Journal du Palais*, "L'Archipel de Kiribati : la menace de l'exil climatique," March 2023 (translation mine). <https://www.palais-portedoree.fr/actualites/l-archipel-de-kiribati-la-menace-de-l-exil-climatique> Accessed on 9 January 2026.

4.3. Tuvalu: one of the most threatened places in the world

This small archipelago in the South Pacific Ocean has 11000 inhabitants and is among the most threatened places in the world because of climate change and rising water. Two of its nine atolls have already been widely submerged and some specialists consider that the Tuvalu will be totally uninhabitable before less than a century. To alert the international commun City about the éminent disappearance of his archipelago, Tuvalu minister of Justice, Communication and Foreign Affairs, Simon Kofe, did not go to the United Nations conference join climate change, la COP26, organized in November 2021 in Glasgow. Instead of flying there, he pronounces cet a famous speech recorded while his feet were in the water. He said: "In Tuvalu, we live the reality of climate and of the rising of sea level [...]. We can't wait for speeches while the sea rises around us." He said : "Our country is disappearing, and now we are bound to become the firths digital nation in the world." ²⁹ This is an innovative solution to safeguard an immaterial heritage. For Gilliane Le Gallic, "this measure is a last option, the aim of which is "not to lose everything". Tuvalu people's culture and values could thus be inscribed in a virtual replica that would immortalize these islands for future generations." The Tuvalu government has the intention to "transfer the access to government and consular services, as well as all the administrative systsystems linked to them, into the cloud."³⁰ A recent article in the French paper *Le Monde* (23 July 2025) alerts people that because they are threatened by water raising more than 80% of the inhabitants of the archipelago ask Australia for a climatic visa: "In Tuvalu archipelago, threatened by rising water, more than 80 % of the inhabitants ask for a climate visa in Australia."³¹ The words welcoming the visitor on the site of Tuvalu are significant and sound like a call for help : "By recreating its land, archiving its culture, and digitising its government, Tuvalu can exist as a nation even after its land is no more. Our digital migration has begun. SAVE TUVALU. SAVE THE WORLD."³²

Is the replacing of real islands by virtual islands a solution to save the world? What is sure is that it helps saving the memory of islands and it allows the world to know about the

²⁹ "Les Tuvalu, un bout du monde menacé de disparition" (22/02/2024) <https://www.fondationdelamer.org/nos-actualites/tuvalu/> Accessed on 9 January 2026.

³⁰ "Rencontre avec Gilliane Le Gallic, fondatrice de l'association ALOFA TUVALU" <https://www.fondationdelamer.org/nos-actualites/tuvalu/> Accessed on 9 January 2026.

³¹ "Dans l'archipel des Tuvalu, menacé par la montée des eaux, plus de 80 % des habitants demandent un visa climatique en Australie" https://www.lemonde.fr/planete/article/2025/07/23/dans-l-archipel-des-tuvalu-menace-par-la-montee-des-eaux-plus-de-80-des-habitants-demandent-un-visa-climatique-en-australie_6623201_3244.html Accessed on 9 January 2026.

³² " The First Digital Nation" <https://www.tuvalu.tv> Accessed on 9 January 2026.

existence of these populations. And it shakes people's awareness about urgencce that concerns all continents.

4.4. Europe has its heartened islands and shorelines

Industrialized countries (those who cause climate change) should not think that they are not threatened by rising waters and that only small islands in Southern counties are concerned. "The title of Eva-Luna Tholance's article (in which she quotes Norton's words) is significant: "L'Europe est plus menacée par la montée des eaux que les pays au Sud."³³

Everybody knows about the danger threatening Venice. And things are not that simple. An article in *National Geographic* says that "[a] system of dams protects Venice from devastating tides but this efficient system could endanger the lagoon by destroying the marshes composing it."³⁴ Frank Viviano writes:

In 2022, Venice—La Serenissima—is a poster child for climate change. The occasional destructive acqua alta, which occurred just a few times per century before 2000, has become the new normal as sea levels rise around the globe. Of the 25 worst acque alte registered in Venice in the past 100 years, each topping 4.5 feet, more than half have happened since December 2009". The system of walls is efficient to protect Venice from rising water: "Called Mose in Italian, Moses in English, the system is in use and seems to be working. [...] But it poses fatal environmental risks to the lagoon's equally fragile and disappearing salt marshes, whose protective structure and biodiversity have been giving life to Venice for 1,800 years.³⁵

And many other places are threatened by rising waters in Europe. The recurring floods in France recently showed that some parts of the country are flooded sometimes several times a year (like Northern France and South Eastern France). The article by Frank Viviano (published in 2022) revealed that the rising water in the Atlantic Ocean chiefly had an impact on the coastal areas of Northern Europe and could be more than one meter in 2100. Michael Norton, head of the environmental program of the EASAC (European Academies' Science Advisory Council) says: "European nations should prepare to a rising of water, and they should adjust their policies

³³ Eva-Luna Tholance. "L'Europe est plus menacée par la montée des eaux que les pays au Sud" (14 June 2021). <https://www.numerama.com/sciences/718962-leurope-est-plus-menacee-par-la-montee-des-eaux-que-les-pays-au-sud.html#:~:text=Les%20principaux%20pays%20concernés%20par,l'Allemagne%20et%20le%20Danemark>.

³⁴ "National Geographic talks about the fragile balance of the Venice Lagoon" <https://www.geoscienze.unipd.it/en/national-geographic-talks-about-fragile-balance-venice-lagoon-0> Accessed on 9 January 2026.

³⁵ Frank Viviano. "Saving Venice from flooding may destroy the ecosystem that sustains it", *National Geographic*. July 25, 2022. <https://www.nationalgeographic.com/environment/article/saving-venice-from-flooding-may-destroy-the-ecosystem-that-sustains-it> Accessed on 9 January 2026.

as new data arrive."³⁶ Scientists' studies show that while the Antarctic melts, the oceans rise northward and the waters rise still more quickly in Europe. The countries most concerned by that are those having coasts on the Northern sea, that is: the United Kingdom, Belgium, the Netherlands (especially Amsterdam), Germany and Denmark. Rising waters spare no countries and powerful industrialized countries are as threatened as Southern countries.³⁷

4.5. America's threatened shorelines

In Northern America and especially the United States, coastlines and cities on shorelines (including New York and San Francisco) are threatened by rising water and floods: "Rising sea levels and sinking land threaten 32 U.S. coastal cities with worsening floods, including New York, Boston, San Francisco, New Orleans and Miami."³⁸ In Hawaii sea level has already risen 5 inches since 1970. And studies indicate that Hawaii can expect 8 inches of sea level by 2050 and 3.5 feet by 2100.³⁹ "Seas are forecast to rise from 8 inches to 23 inches along the nation's coasts by 2050, with the higher increases along the northern Gulf Coast and mid-Atlantic. Every inch of additional water is expected to move farther inland making flood events worse and putting more properties at risk."⁴⁰

4.6. Africa: Nyanga Island

In Africa, Nyanga Island is another of the most threatened places in the world. An aerial view of structures on Nyanga Island, was taken on April 30, 2025. More than two million people living along Sierra Leone's coasts are threatened by rising sea levels, according to a study

³⁶ Michael Norton in Eva-Luna Tholance. "L'Europe est plus menacée par la montée des eaux que les pays au Sud" (14 June 2021). <https://www.numerama.com/sciences/718962-leurope-est-plus-menacee-par-la-montee-des-eaux-que-les-pays-au-sud.html#:~:text=Les%20principaux%20pays%20concernés%20par,l'Allemagne%20et%20le%20Danemark>. Accessed on 9 January 2026.

³⁷ "La hausse des océans n'épargnera pas les grandes puissances mondiales" <https://www.futura-sciences.com/planete/actualites/rechauffement-climatique-hausse-oceans-nepargnera-pas-grandes-puissances-mondiales-60711/> Accessed on 9 January 2026.

³⁸ Ben Turner. "32 U.S. cities, including New York and San Francisco, are sinking into the ocean and face major flood risks by 2050, new study reveals," March 6, 2024. <https://www.livescience.com/planet-earth/climate-change/32-us-cities-including-new-york-and-san-francisco-are-sinking-into-the-ocean-and-face-major-flood-risks-by-2050-new-study-reveals> Accessed on 9 January 2026.

³⁹ <https://climate.hawaii.gov/hi-facts/sea-level-rise/> Accessed on 9 January 2026.

⁴⁰ See Elizabeth Weise. "US coasts face a crisis as land sinks and seas rise." <https://eu.usatoday.com/story/news/nation/2025/05/25/sea-level-rise-at-us-coasts/83817776007/> Accessed on 9 January 2026.

conducted in June 2024 by the Sierra Leone National Disaster Management Agency (NDMA) and the Internal Displacement Monitoring Centre (IDMC), a leading international organization monitoring internal displacement.⁴¹ This West African country is one of the most threatened in the world by global warming, and its coastal region "is very vulnerable to the increasingly frequent and severe phenomena of erosion and rising waters caused by the effects of climate change and human activities," the study stresses. It also highlights the impoverishment of these populations, whose food security and health have deteriorated."⁴²

4.7. Sudan: from floods to action

We will end with the case of an island in Southern Sudan: The Sudd [is] a vast swamp in South Sudan, formed by the White Nile's Bahr al-Jahal section. The Arabic word *sudd* is derived from *sadd* (سَد), meaning "barrier."⁴³

The term "*sudd*" has come to refer to any large solid floating vegetation island or mat. The area which the swamp covers is one of the world's largest wetlands and the largest freshwater wetland in the Nile Basin. It is one of the largest wet lands in the world. Its inhabitants live to the rhythm of floods, varying according to the rains and the rising of the waters of Victoria Lake, upstream, in Uganda. But recently, extreme floods affected Southern Sudan, submerging two thirds of the country. In Old Fangak, only two dykes made with mud protect the inhabitants from submersion.⁴⁴ A report from the organization "Médecins sans frontières" explains that. The populations most affected by climate change are not those that provoke climate change. The report made by the organization in Southern Sudan is particularly significant: it is a region where the carbon rate is neutral and has not the least incidence on climate change. The inhabitants do not contribute to climate change but are the victims of it. Floods have drowned their cultures and their cattle. They had nothing more to eat and only their

⁴¹ "Impacts of displacement: Displacement linked to sea level rise on Plantain Island, Sierra Leone" <https://www.internal-displacement.org/publications/impacts-of-displacement-displacement-linked-to-sea-level-rise-sierra-leone/> Accessed on 9 January 2026.

⁴² "Droughts Floods Fires: These photos show how the Earth's climate is changing" <https://eu.usatoday.com/picture-gallery/news/world/2022/03/01/global-warming-disasters/9333680002/> Accessed on 9 January 2026.

⁴³ Gaudet, John J.; Falconer, A. (1983). Remote sensing for tropical freshwater bodies. The problem of floating islands on Lake Naivasha. Nairobi, Kenya: Regional Remote Sensing Facility. <https://en.wikipedia.org/wiki/Sudd> Accessed on 9 January 2026.

⁴⁴ "Life on the levee: Extreme flooding in Old Fangak", <https://www.msf.org/life-levee-south-sudan> Accessed on 9 January 2026.

imagination to survive. So, they built artificial islands after finding shelter on the only island that was not covered with water. They survived thanks to rafts of grasses. They survived thanks to fish and some sugar cane that was left. But their leader called out to ask all those causing climate disruption, to stop. They/we condemn all those populations living near river banks or ocean shores and on islands. And yet all those communities who are condemned don't pollute the world and don't transform the climate. The documentary was made in 2024 in Old Fangak, in the state of Jonglei, where the teams of "Médecins Sans Frontières" (MSF) intervene. Since that date, torrentiel rains and the high level of rivers have submerged most of the villages situated around Old Fangak.⁴⁵

Unlike the artificial islands synonymous with money and unawareness, these artificial islands are a paradox in so far as these communities build the kind of land that is most vulnerable. And yet sometimes created islands can rescue lives. The example is given in nature with ants.

Have you already observed what ants do when they are on the verge of getting drowned? They gather together and create an artificial raft with their bodies; all are united and they sail until they reach a piece of land where they can take up their earthly life. I first discovered that in a report and had a chance to see it in my garden where ants had taken shelter in a pluviometer; one day when the pluviometer was full of water after rain, I found them all united in a living raft on which they had placed their eggs. Such a living raft of ants has been seen in North Carolina after the flooding of their ant hill. David Larousserie evokes some studies on ants' behavior in case of floods.⁴⁶ Two teams, one in Taiwan, and the other in Colorado, study the survival reaction of ants (fire ants) from the species *Solenopsis invicta* in case of rising water. These ants coming from South America have conquered the USA, China and Australia since the 1930s. They have been considered as an invasive species in Europe since 2014. But as the article says, since 2011, they have been known for their talents as "physicists." David Hu from the Institute of Technology of Georgia, in Atlanta, worked on them. These ants show what their survival instinct leads them to invent. The creation of an artificial island to preserve a community... This is what people from Sudan did. But the best action to protect islands (and

⁴⁵ See "Médecins sans Frontières": "Les Naufragés d'Old Fangak", a documentary on extreme floods in Southern Sudan. <https://www.msf.fr/video/les-naufrages-d-old-fangak-un-documentaire-sur-les-inondations-extremes-au-soudan-du-sud> Accessed on 26 November 2024.

⁴⁶ David Larousserie. "L'insubmersible radeau des fourmis pour faire face aux inondations" *Le Monde*. 16 January 2024. https://www.lemonde.fr/sciences/article/2024/01/16/l-insubmersible-radeau-des-fourmis-pour-faire-face-aux-inondations_6211051_1650684.html Accessed on 9 January 2026.

thus the world) should be to change our behaviors and choose ingrowth instead of growth, travelling less and consuming less, living in a more conscious way.

Conclusion

Islands are threatened all over the world. But as long as there are islands on the Earth there will be hope. Hope for a more conscious world, hope for a world where dreams still exist for everybody, hope for lots of species to live on.

I don't know if one day my dream of spending a few days on an island alone or with a person I love will come true. But what I know is that at any moment I can open Jules Verne's *Mysterious Island* and read it again to remember islands and to make my interior island the first tool to try to change things and be one of the multiple Captains Nemo (or ants) in this world who each build their special Nautilus: each one and all together...like the ants (a Nautilus that can be a book, an artificial island to save a village and a community, a song or a gesture. It's up to everyone to know which gesture can be done.

Bibliography

Boers, Niklas 2021, "Observation-based early-warning signals for a collapse of the Atlantic Meridional Overturning Circulation." *Nature Climate Change*. doi: 10.1038/s41558-021-01097-4.

Chevalier, Jean and Alain Gheerbrant. *Dictionnaire des symboles*, Paris : Robert Laffont, 1982.

Hurst Thomas, David, Jay Miller, Richard White, Peter Nabokov, Philip J. Deloria. *The Native Americans (An Illustrated History)*, JG Press, 2001 [*Les Indiens d'Amérique*, Monaco: éd. du Rocher, 1994 for the French translation].

Monod, Théodore. *Les carnets de Théodore Monod* (Arhet, 27 juillet 1929), Paris : Le Pré aux Clercs, 1997.

Picoche, Jacqueline. *Dictionnaire étymologique du français*, Paris : Dictionnaires Le Robert, 1994.

Pignatti, Terision. *Venise*, Paris: Albin Michel, 1971, 260-261, translated from Italian by H. de Mariassy, C. de Lignac and J. Remillet.

Schneider-Mayerson, Matthew. 2020. "Just as in the book"? The influence of literature on readers' awareness of climate injustice and perception of climate migrants." *ISLE: Interdisciplinary Studies in Literature and Environment* 27 (2): 337–364.

Schneider-Mayerson, Matthew, Abel Gustafson, Anthony Leiserowitz, Matthew H. Goldberg, Seth A. Rosenthal, and Matthew Ballew. 2020. "Environmental literature as persuasion: An experimental test of the effects of reading climate fiction." *Environmental Communication*. Doi: 10.1080/17524032.2020.1814377.

Serres, Michel. *Jouvences sur Jules Verne*, Les Editions de Minuit, 1991

Verne, Jules. *L'île mystérieuse*, Paris : Hachette, 1960,234.

Vierne, Simone. Introduction to Jules Verne. *Vingt mille lieues sous les mers*, Paris: Garnier-Flammarion, 1977/

Vierne, Simone. Introduction to Jules Verne. *Voyage au centre de la terre*, Paris: Garnier-Flammarion, 1977.

Vierne, Simone. *Jules Verne et le roman initiatique*, édition du Sirac, 1973. .

Young, Rebecca L. (ed.) *Literature as a Lens For Climate Change. Using Narratives to Prepare the Next Generation.* Lexington Books, 2022. <https://www.asau.ru/files/pdf/3158371.pdf>

Electronic resources

"À Amiens, Jules Verne vous reçoit *chez lui*" <https://www.plusaunord.com/jules-verne/>

"Amiens : Le Nautilus s'installe au musée" <https://www.weo.fr/video/amiens-le-nautilus-sinstalle-au-musee/>

Camus, Guigone. An interview for the *Journal du Palais*, "L'Archipel de Kiribati : la menace de l'exil climatique," March 2023. <https://www.palais-portedoree.fr/actualites/l-archipel-de-kiribati-la-menace-de-l-exil-climatique>

Committee for Development Policy 20th Plenary Session. United Nations. New York, 12-16 March 2018 <https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/CDP-PL-2018-6b.pdf>

"Dans l'archipel des Tuvalu, menacé par la montée des eaux, plus de 80 % des habitants demandent un visa climatique en Australie" https://www.lemonde.fr/planete/article/2025/07/23/dans-l-archipel-des-tuvalu-menace-par-la-montee-des-eaux-plus-de-80-des-habitants-demandent-un-visa-climatique-en-australie_6623201_3244.html

Demeure, Yohan. "Oxagon : un projet de cité flottante industrielle très controversé". 24 novembre 2023. [Yohan Demeure <https://sciencepost.fr/oxagon-cite-flottante-tres-controversee/>](https://sciencepost.fr/oxagon-cite-flottante-tres-controversee/)

"Droughts Floods Fires: These photos show how the Earth's climate is changing" <https://eu.usatoday.com/picture-gallery/news/world/2022/03/01/global-warming-disasters/9333680002/>

Holleis, Jennifer and Kersten Knipp. "Saudi Arabia's Neom: A prestigious project with a dark side." <https://www.dw.com/en/saudi-arabias-neom-a-prestigious-project-with-a-dark-side/a-65664704>

"Impacts of displacement: Displacement linked to sea level rise on Plantain Island, Sierra Leone" <https://www.internal-displacement.org/publications/impacts-of-displacement-displacement-linked-to-sea-level-rise-sierra-leone/>

Karthika, V.K.. "Photographing Vulnerability: Trans-scalar Articulations of Precarity from the Shorelines of Kerala" <https://www.arithmeticofcompassion.org/blog/2023/4/18/photographing-vulnerability-trans-scalar-articulations-of-precarity-from-the-shorelines-of-kerala>

"KIRIBATI: History of natural disasters since 1938" <https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/CDP-PL-2018-6b.pdf>

Larousserie, David. "L'insubmersible radeau des fourmis pour faire face aux inondations" *Le Monde*. 16 January 2024. https://www.lemonde.fr/sciences/article/2024/01/16/l-insubmersible-raedeau-des-fourmis-pour-faire-face-aux-inondations_6211051_1650684.html

"La hausse des océans n'épargnera pas les grandes puissances mondiales" <https://www.futura-sciences.com/planete/actualites/rechauffement-climatique-hausse-oceans-nepargnera-pas-grandes-puissances-mondiales-60711/>

"Les Tuvalu, un bout du monde menacé de disparition" (22/02/2024) <https://www.fondationdelamer.org/nos-actualites/tuvalu/>

"Life on the levee: Extreme flooding in Old Fangak", <https://www.msf.org/life-levee-south-sudan>

Médecins sans Frontières": "Les Naufragés d'Old Fangak", documentary. <https://www.msf.fr/video/les-naufrages-d-old-fangak-un-documentaire-sur-les-inondations-extremes-au-soudan-du-sud>

"National Geographic talks about the fragile balance of the Venice Lagoon" <https://www.geoscienze.unipd.it/en/national-geographic-talks-about-fragile-balance-venice-lagoon-0>

"NEOM, Marriott International announce new Saudi luxury apartments in Sindalah". *Arabian Business*. 11 January 2024. Retrieved 14 February 2024.

"Rencontre avec Gilliane Le Gallic, fondatrice de l'association ALOFA TUVALU" <https://www.fondationdelamer.org/nos-actualites/tuvalu/>

"Rising Sea Level" <https://climate.hawaii.gov/hi-facts/sea-level-rise/>

Slovic, Scott. "Seeking a Discourse of Environmental Sensitivity: Psychology and Public Engagement in *Voyager pour penser.*" A lecture given in Toulouse (France) at the Académie des Sciences Inscriptions et Belles Lettres de Toulouse, France. Film by Jacques Madrènes <https://vimeo.com/933138251/da2e09914b?share=copy>

"The First Digital Nation" <https://www.tuvalu.tv>

Tholance, Eva-Luna. "L'Europe est plus menacée par la montée des eaux que les pays au Sud" (14 June 2021). <https://www.numerama.com/sciences/718962-leurope-est-plus-menacee-par-la-montee-des-eaux-que-les-pays-au-sud.html#:~:text=Les%20principaux%20pays%20concernés%20par,l'Allemagne%20et%20le%20Danemark>

Turner, Ben. "32 U.S. cities, including New York and San Francisco, are sinking into the ocean and face major flood risks by 2050, new study reveals," March 6, 2024. <https://www.livescience.com/planet-earth/climate-change/32-us-cities-including-new-york-and-san-francisco-are-sinking-into-the-ocean-and-face-major-flood-risks-by-2050-new-study-reveals> r. "

Viviano, Frank. "Saving Venice from flooding may destroy the ecosystem that sustains it", *National Geographic*. July 25, 2022. <https://www.nationalgeographic.com/environment/article/saving-venice-from-flooding-may-destroy-the-ecosystem-that-sustains-it>

Weise, Elizabeth. "US coasts face a crisis as land sinks and seas rise." <https://eu.usatoday.com/story/news/nation/2025/05/25/sea-level-rise-at-us-coasts/83817776007/>