

Sinking into the Sea?

Climate Change and AOSIS Strategies

Camille Marie Risager Højland

Master in Political Sciences

Department of Political Science, Aarhus BSS, Aarhus University

Bartholins All é7, DK-8000 Aarhus C, Denmark

&

Gert Tinggaard Svendsen (Corresponding Author)

Professor, PhD

Department of Political Science, Aarhus BSS, Aarhus University

Bartholins All é7, DK-8000 Aarhus C, Denmark

gts@ps.au.dk

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Abstract

Climate change poses a serious threat to the world, in particular to the Small Island Developing States (SIDS). The organisation Alliance of Small Island States (AOSIS) represents the SIDS by giving them a voice in the United Nations. We discuss the different aspects of climate change and the role that a small actor like AOSIS plays in protecting the citizens of its member states rather than free ride on larger actors. Which strategies should AOSIS use to encourage an even more ambitious climate policy in the future? We suggest five relevant strategies: 1) Introduction of sanctions in the Paris Agreement, 2) A CO₂ tax, 3) Subsidising new green technology, 4) That AOSIS should look for coalition partners, e.g. China, and 5) Even stronger focus on the linkage between climate change and future migration. Employing such strategies may save the SIDS from sinking into the sea and, at the same time, secure the target level from the Paris Agreement.



1. Introduction

There is a constant focus on climate change as a concern for future generations. A new report from the Arctic Monitoring and Assessment Program (AMAP) shows that the rise in temperature in the Arctic regions means that the sea is rising faster than expected in all previous forecasts (AMAP, 2017: p. 8). The phenomenon of climate change will not need hundreds of years to be immensely costly for the population of our planet (Frostenson, 2017). Thus, finding a sustainable solution to the climate problems is even more urgent than previously assumed (UN, 2017). Rising sea levels in the world's oceans will particularly affect small island states in the Pacific and other low-lying countries. Unlike other rich low-lying countries such as the Netherlands, the small islands in the Pacific do not have sufficient resources to build dams to protect themselves from the rising sea levels (UNFCCC, 2005, p. 11) This makes them highly dependent on the initiatives of other major actors.

These small, low-lying islands are referred to as SIDS (Small Island Developing States). In this article, SIDS will be used as a synonym for the "island states" or simply the "islands". As a group of small islands, SIDS has limited opportunities to play any major role in international negotiations. Although there is broad support for the use of the term "SIDS", not all member states fully live up to the definition of being small island developing states (Kelman & West, 2009, p. 1). Included in the SIDS group are also countries such as Cuba, Bahrain and other coastal areas. Officially, SIDS consists of 57 low-lying islands and coastal communities scattered throughout the world. All islands are not grouped in just one location, but may be divided into three subcategories depending on the ocean where the islands are found. The first group is located in the Caribbean Sea, where the vast majority of SIDS is found. The second group is in the Pacific Ocean and the third group is a collection of islands located at the coast of Africa, in the Indian Ocean, the Mediterranean and the South China Sea. Collectively this group is referred to as AIMS (AOSIS, 2017).

In the following, the main focus will be on the interest organisation Allicance of Small Island States (AOSIS), which represents SIDS, *not* on all SIDS. AOSIS consists of many islands that differ not only with respect to geography, but also with respect to culture, language and history. By focusing on AOSIS as a unitary actor, we are, however, able to ignore such differences among the individual small island states. In fact, AOSIS works very hard towards the same common goal: lowering global greenhouse gas emissions in order to prevent a deterioration of climate change. Because of this one and very clear goal, it is easier for AOSIS to create a cohesive group which has a common goal in mind: the problem of climate change (Kelman & West, 2009, p. 2).

Through which strategies can AOSIS – as a small player – best exert its political influence in relation to climate agreements? This is the question we wish to answer in the following. Here, a gap in the literature exists. The traditional approach so far has been to view small actors as potential free riders (that will exploit the contributions from larger actors) rather than being active participants in the climate negotiations themselves (Brandt & Svendsen, 2016a; Svendsen, 2005). However, we look for relatively cheap strategies that may pay to undertake even for small and poor actors. In Section 2 we look at climate change and the Paris



Agreement. Section 3 discusses the basis for AOSIS strategies, i.e. the shortcomings of the Paris Agreement, possible coalitions for AOSIS and climate refugees from SIDS and other regions in the World. Finally, based on the previous discussions, Section 4 suggests five possible climate strategies for AOSIS.

2. Climate Change and the Paris Agreement

2.1 Climate Change

Climate change may be defined as fluctuations in average measurements over time: "Climate change is also a change in Earth's overall climate. This could be a change in Earth's average temperature, for example. Or it could be a change in Earth's typical precipitation patterns" (NASA, 2011). As Ban Ki-moon, the former Secretary-General of the United Nations, has put it: "Climate change is coming much, much faster than anticipated. We have seen such extraordinarily extreme weather patterns. If you consider the vastness of this universe, this earth is just a small boat, and if this boat is sinking, I think we will all have to sink together" (Before the Flood, 2016).

In addition to the material damage, the biodiversity of the islands will be at great risk of decreasing, resulting in the extinction of several species (UNFCCC, 2005, pp. 17–21). The forecasts for the islanders' health and general well-being will be exacerbated by the devastation that climate change will cause. It is predicted that AOSIS member states will be in dire need of emergency aid from international aid organisations (McIver et al., 2016, p. 1707). AOSIS was established in 1990 in order to promote SIDS' case and keep climate change, such as global warming, on the UN agenda (AOSIS, 2017). AOSIS plays a major role in representing SIDS' interests in connection with negotiations on climate policy under the auspices of the UN. The most important achievement by AOSIS is the adoption of the Kyoto Protocol in 1997, which AOSIS helped formulate (Wallbott, 2014, p. 737; Brandt & Svendsen, 2002).

The consequences of climate change caused by global warming are countless and extremely widespread for SIDS. Due to interchangeable and violent weather conditions resulting from climate change as well as rising sea levels, most islands in AOSIS will be at risk of losing large parts of their infrastructure, commerce and residential areas: "Even without that extreme scenario, under average IPCC (2007) scenarios, several SIDS are expected to lose significant proportions of their land due to sea level rise, including Tuvalu, Tonga, Kiribati, Marshall Islands, Tokelau, and the Maldives. Even larger SIDS with much land area well above potential sea level rise – such as Fiji, Puerto Rico, and Samoa – could have problems (...)" (Kelman & West, 2009, p. 3).

2.2 The Paris Agreement

After several failed attempts to create a global agreement on reduced levels of e.g. CO_2 emissions, COP21 in Paris managed to get 195 countries to sign what is now known as the Paris Agreement in December 2015. The Paris Agreement is binding, and it is difficult to withdraw for individual countries. One of the most important results of the recent climate agreement is the recognition that climate change is not something that will happen 50 to 100

years from now, but something that already affects the entire population of the globe (Giddens, 2015). Although climate change has different effects around the world, sooner or later everyone will be affected (The Economist, 2009).

The four main goals of the agreement are as follows (Commission, 2017): 1) A long-term goal of keeping the rise in global temperature below $2 \ C$ above the pre-industrial level; 2) Aiming to keep the rise at 1.5 $\ C$, as this would lower the risks associated with the consequences of climate change; 3) Recognising the need for the global level of greenhouse gases to peak as quickly as possible, but being aware that this will take longer for developing countries; 4) Subsequently undergoing drastic reductions in accordance with best available science.

In other words, items one and two mean that countries commit to keeping the global temperature rise within this century at a maximum of $2 \,^{\circ}$ C above the pre-industrial level (UNFCCC, 2015, article 2). The more ambitious plan is to limit temperature rises to $1.5 \,^{\circ}$ C, although this is only a potential goal – not a requirement. Item three takes a closer look at the emission of greenhouse gases, where the goal is to reach the point where the countries emit their maximum amount of greenhouse gases as soon as possible. This simply means that the development must subsequently be such that the countries emit lesser amounts in the future, and never as much as they emitted when they emitted the most. In this context it must also be considered that developing countries that are working to improve their economy and living conditions will have a long way ahead of them since they need industry to create wealth and increase the well-being of their populations. In this respect, the developing countries in question need help from the industrialised countries. The fourth item speaks for itself, as it is stipulated that all countries must do their utmost to reduce the emission as much as possible. Countries must strive to achieve this, based on recognised scientific goals and regulations.

AOSIS' primary goal is to ensure implementation of the more ambitious plan of the Paris Agreement, i.e. keeping temperature rises at 1.5 °C, rather than the current agreement about a maximum temperature rise of 2 °C (Vogler, 2016, p. 40). In addition to this more recent battle to keep global temperature rises at 1.5 °C above the pre-industrial level, AOSIS has previously demanded that the liability for global warming should be distributed differently among the countries that have emitted CO_2 and thus contributed to the greenhouse effect. This has played a certain role in the debate about climate policy in the UN, but it has not yet resulted in any actual agreements that included this aspect (ibid., pp. 104–106).

3. Five Possible Strategies

3.1 The Paris Agreement's Lack of Sanctions

Despite the fact that the Paris Agreement is binding, there are several major problems in the Agreement. The biggest problem is the lack of sanctions against the countries that do not meet the goals described in the Agreement. Although parts of the Agreement are legally binding, it does not mean that future governments are bound by the same obligations (Harvey, 2016). The lack of sanctions means that the individual countries do not feel a sufficiently urgent need to expedite the process of converting the entire country's infrastructure to



renewable energy.

*3.2 A CO*₂ *Tax*

In line with the lack of sanctions that might affect the countries' economy, it should be mentioned that the Paris Agreement lacks a method to impose taxes on CO_2 emission. Even though this issue has been discussed several times as being a useful way of influencing the behaviour and speeding up the conversion to renewable energy, it is not included in the Paris Agreement (Mansell, 2016). In particular, a CO_2 tax per ton of emitted CO_2 would have been preferable as it would affect the large companies with high CO_2 emission rates (Metcalf, 2008). Some form of sanction on the countries that do not comply with the climate goals and a CO_2 tax that would hit large companies with high CO_2 emission rates, would both constitute major improvements for the visions of the Paris Agreement.

The countries, which choose to back the Paris Agreement, have to go back to their respective parliaments and adopt various measures that will ensure that they meet the goals of the Paris Agreement. This may turn out to be a major challenge as climate sceptics and industrial interests may potentially block such actions at national level through intensive lobbying and financial support to opponents of the proposal, e.g. to avoid a CO_2 tax or to oppose innovation within green technology (Brandt & Svendsen, 2016a, 2014). In fact, it can be traced how industrial interests affected the final design of the European Emission Trading System (Markussen & Svendsen, 2005). This potential lobbying obstacle to the implementation of the climate goals poses major challenges for small organisations such as AOSIS.

3.3 Subsidising New Green Technology

Simply implementing a Pigou tax on fossil fuels (coal, oil and gas) would speed up the switch point in time when it is more profitable in the market to use renewable energy sources such as wind, solar, biomass and wave energy. Furthermore, the switch point will occur even sooner if renewables and new green technology are subsidised at the same time. This is in fact what has happened in Denmark when promoting wind energy at the expense of fossil fuels (Svendsen, 2013). Such rapid transition from brown to green energy would clearly benefit AOSIS directly as CO₂ emissions would drop significantly, which also has been the case in Denmark due to the strong expansion of wind power. An extreme case is the island of Sams ø, located in Denmark. Within eight years, this island became independent from fossil fuels due to the local installation and financing of offshore wind farms, all due to green entrepreneurship (Brandt & Svendsen, 2016b).

An option could be to "borrow" money for present green investments from future generations. Taking loans now, e.g. in the form of government bonds, could help finance the missing research required in order to develop the technology needed for conversion to renewable energy. Elon Musk has stated that he already has virtually all the technology and just lacks funding to produce batteries (charged through renewable energy sources) at an adequate scale to provide the entire global population with sustainable energy (Before the Flood, 2016). These technological advances have nearly reached a stage where they may be implemented as

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sustainable and cheap methods (Mack, 2016). Such approach is in line with the vision presented in the Brundtland report, i.e. that there must be fairness between generations, and that we must therefore leave the earth in a good condition for future generations (Brundtland, 1987, pp. 286–288).

3.4 Coalition Formation

Despite the fact that the Paris Agreement does not require a majority and does not have an authority corresponding to a government that can make decisions on behalf of all parties, it would be beneficial for AOSIS to join coalitions in order to be able to state its arguments with more backing. There are already examples of AOSIS entering into "coalitions" in connection with climate negotiations. In particular, AOSIS has received support from most North European countries which also have an interest in renewable energy. The large wind and solar industries in countries such as Denmark and Germany help strengthen the support of AOSIS' case. France is still dependent on nuclear power which helps reduce the country's greenhouse gas emission (Vogler, 2016, p. 65). In other words, several EU countries support the AOSIS goal: to lower the global greenhouse gas emission. Besides, it is an advantage for these countries to focus on the "green profile" they are able to build by supporting small organisations like AOSIS (Wallbott, 2014, p. 737).

Although it is good for the global greenhouse gas emissions that several EU countries use large amounts of renewable energy, it would be even more effective for AOSIS to join a country with some of the world's largest carbon emissions. As the recently elected US president, Donald Trump, has made it clear that he will not prioritise neither climate nor the environment, it may be more useful for AOSIS to spend its time and resources on focusing on another country with major emissions of greenhouse gases (Popovich, 2017).

China would be a good potential coalition partner in this respect as it is already struggling with high levels of pollution. This serious threat to public health of its citizens has prompted the Chinese government to send public messages to the population, with information on how to be more sustainable and climate-conscious consumers (Eberhardt, 2015, p. 34; Hern ández, 2017). China has also put a lot of efforts into making a big dent in the market for renewable energy. The world's largest wind turbine producers are now located in China (Hern ández, 2017). This is a strong indication that the Chinese government wishes to promote Chinese industrial interests, at the same time protecting the public health. Also, wind turbine producers tend to be well-organized due to small-group advantages and one clear and common goal, namely to increase the megawatt production based on wind turbines (Svendsen, 2011).

However, it is dangerous to draw conclusions about China's future intentions and motivations to follow a more sustainable path by converting to renewable energy. It has previously proven difficult to predict the actions of the Chinese government, partly because it is a challenge for international observers to gain access to internal plans and factories (Eberhardt, 2015, p. 34). Still, China is heading towards a higher consumption of renewable energy and lower levels of pollution, probably due to the first-mover advantages in a future, booming green market (Brandt & Svendsen, 2006). In other words, China's initiatives within renewable energy may

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help facilitate the adoption and implementation of the Paris Agreement on a global scale. All of this will be an advantage to AOSIS as they will have an extremely strong cooperation partner if China would demonstrate its support for more ambitious climate initiatives.

3.5 Climate Refugees

A recent study by Scientific Reports shows that the majority of the world will experience a doubling of major flooding, so-called 100-year events, already by 2050 (Vitousek et al., 2017, p. 6). This means that particularly low-lying islands and areas that are already very dry will be extremely exposed and in some cases become largely uninhabitable (Eleftheriou-Smith, 2016). As populations living along the coast will move further inland and other populations will be driven away by drought, it seems reasonable to assume that the concentration of people will grow within increasingly small areas. In other words, more people will have to share less space and fewer resources if drastic steps are not taken towards a more sustainable way of life for all of us. A prediction that may be reasonably drawn in the light of those trends is that in the coming decades, the world will increasingly experience migration by refugees, directly or indirectly caused by climate change.

Thus, it might be beneficial for AOSIS to extend its rhetoric to include some of the topics from the current political situation. Especially, the Syrian refugee flows through Europe, which have caused havoc since the beginning of the war in 2011, have dominated the international political climate. The linkage between increasing climate problems, such as drought, and the risk of conflict has been established by several researchers in the field (Kelley et al., 2015, p. 3241; Podesta & Ogden, 2008, p. 116). Due to the lack of basic resources – as in the case of the Syrian civil war, where many villages lacked water – large crowds of people migrate towards the cities. This pressure on highly concentrated geographic areas as well as a repressive regime, where only special sections of the population have access to power, resulted in the case of Syria in a civil war. Such crises are likely to occur even more frequently in the future. Already today, there is a similar crisis in Yemen which has been hit hard by famine (Mantoo, 2017).

By emphasising the linkage between climate change, conflict and, ultimately, refugee flows, AOSIS would be able to show more of the major industrialised countries what the future may look like if drastic steps are not taken to convert to renewable energy. Another aspect of the problem with the islands is that they are not just becoming uninhabitable as is the case with e.g. drought-stricken areas, but that they will simply disappear. Landmasses are lost, and even if the climate is restored there will hardly be any land for potential refugees to return to. This scenario does not benefit either the industrialised countries or AOSIS (Dennison, 2016).

4. Conclusion

The Small Island Developing States (SIDS) face a serious threat posed by climate change they literally risk sinking into the sea in near future. In the United Nations, the SIDS are represented by the Alliance of Small Island States (AOSIS). Rather than free ride on the larger countries or actors in the Paris Treaty, we discussed how a small actor like AOSIS may use relatively cheap strategies to encourage an even more ambitious climate policy in the



future. We suggested five relevant strategies, namely:

- 1) Ability to impose sanctions on countries/actors who do not comply with the goal of the Paris Agreement to limit temperature rises to 2 °C.
- 2) A CO₂ tax which will hit the largest emitters of CO₂ the hardest.
- 3) Significant financing of technological advances that may improve the storage of energy and make the production of renewable energy a cheaper alternative to fossil fuels.
- 4) Coalitions with large countries, such as China, which may also have an economic interest in a tighter future climate policy.
- 5) Increased focus on the linkage between climate change and future flows of refugees.

Pursuing these five main strategies may significantly improve the chance of having AOSIS making an impact on future climate negotiations, perhaps even enough to avoid sinking into the sea.

References

AMAP (2017). Snow, Water, Ice and Permafrost in the Arctic: summary for policymakers. *Arctic Monitoring Assessment Programme (AMAP)*. Arctic Council. 1–19.

AOSIS (2017). Alliance of Small Island States. Available: http://aosis.org/about/ (March 6, 2017).

Before the Flood (2016). *Before the Flood*. Documentary directed by Steven Fischer, National Geographic.

Brandt, U. S., & Svendsen, G. T. (2002). Hot air in Kyoto, cold air in The Hague: the failure of global climate negotiations, *Energy Policy*. 30. 1191–99. https://doi.org/10.1016/S0301-4215(02)00015-0

Brandt, U. S., & Svendsen, G. T. (2006). Climate change negotiations and first-mover advantages: the case of the wind turbine industry, *Energy Policy*. 34. 1175–84. https://doi.org/10.1016/j.enpol.2004.10.019

Brandt, U. S., & Svendsen, G. T. (2014). A Global CO₂-tax for sustainable development. *Journal of Sustainable Development*. 7. 85–93. http://dx.doi.org/10.5539/jsd.v7n1p85

Brandt, U. S., & Svendsen, G. T. (2016a). *The Politics of Persuasion: Should Lobbying Be Regulated in the EU?* Cheltenham, UK: Edward Elgar Publishing. http://dx.doi.org/10.4337/9781782546702

Brandt, U. S., & Svendsen, G. T. (2016b). When can a green entrepreneur manage the local environment? *Journal of Environmental Management*. 183 (3). 622–629. https://doi.org/10.1016/j.jenvman.2016.09.007

Brundtland (1987). Our Common Future. *The World Commission on Environment and Development* : 1-300. http://www.un-documents.net/our-common-future.pdf (May 15, 2017)



Commission (2017). "Paris Agreement", *European Commission* https://ec.europa.eu/clima/policies (March 10, 2017)

Dennison, S. (2016). Seven Worrying Trends in the European Refugee Crisis. *European Council on Foreign Relations*. October 13, 2016. Available:

http://www.ecfr.eu/article/commentary_seven_worrying_trends_in_the_european_refugee_cri sis7138 (May 15, 2017).

Eberhardt, C. (2015). Discourse on Climate Change in China: A public sphere without the public. *China Information*. 29 (1). 33–59. https://doi.org/10.1177/0920203X15571261

Eleftheriou-Smith, L.-M. (2016). Climate change could make parts of the Middle East and North Africa 'uninhabitable'. *Independent*. May 3, 2016. Available:

http://www.independent.co.uk/news/science/climate-change-could-make-parts-of-the-middle-east-and-north-africa-uninhabitable-a7010811.html (May 29, 2017).

Frostenson, S. (2017). In 4 days, a river that had flowed for millennia disappeared. *Vox.* April 24, 2017.

https://www.vox.com/science-and-health/2017/4/24/15379046/4-days-river-millennia-disapp eared (June 5, 2017)

Giddens, A. (2015). The Politics of Climate Change. *Policy and Politics*, 43, 2, 155–162. https://doi.org/10.1111/j.1744-540x.2009.00557.x

Harvey, Fiona (2016). "Keep it on the ground: the Paris climate agreement is now official", *The Guardian*, 4. november, 2016.

https://www.theguardian.com/environment/2016/nov/04/the-paris-climate-agreement-is-now-official

https://www.theguardian.com/environment/2016/nov/04/the-paris-climate-agreement-is-now-official (May 3, 2017)

Hern ández, J. C. (2017). Climate Change May Be Intensifying China's Smog Crisis. *The New York Times*. March 24, 2017. Available:

https://www.nytimes.com/2017/03/24/world/asia/china-air-pollution-smog-climate-change.ht ml?_r=0 (June 5, 2017).

Kelley, C.P.,Mohtadi, S., Cane, M.A., Seager, R. & Kushnir, Y. (2015). Climate change in the Fertile Crescent and implications of the recent Syrian drought. In S. Mohtadi, M. A. Cane, R. Seager, & Y. Kushnir (Eds.), *PNAS*. January 30, 2015. 3241–3246. https://doi.org/ 10.1073/pnas.1421533112

Kelman, I., & West, J. J. (2009). Climate Change and Small Island Developing States: A Critical Review. *Ecological and Environmental Anthropology*. 5. 1.

Mack, E. (2016). How Tesla and Elon Musk's 'Gigafactories' could save the world. *Forbes*, October, 30, 2016. Available: https://www.forbes.com/sites/ericmack (May 15).

Mansell, A. (2016). What's Ahead for Carbon Markets after COP 21. *Center for Climate and Energy Solutions*. February 2016. Available:



https://www.c2es.org/newsroom/articles/whats-ahead-for-carbon-markets-after-cop-21 (May 15, 2017).

Mantoo, S. (2017). UNHCR braces for further displacement as Yemen conflict intensifies. *UNHCR*, April 25, 2017. Available:

http://www.unhcr.org/news/latest/2017/4/58fe21e44/unhcr-braces-further-displacement-yeme n-conflict-intensifies.html (May 15, 2017).

Markussen, P., & Svendsen, G. T. (2005). Industry lobbying and the political economy of GHG trade in the European Union, *Energy Policy*. 33. 245–55. https://doi.org/10.1016/S0301-4215(03)00238-6

Metcalf, G. E. (2008). Designing a carbon tax to reduce U.S. greenhouse gas emissions. *National Bureau of Economic Research*. October 2008. 1–36. https://doi.org/10.3386/w14375

McIver, L., Kim, R., Woodward, A., Hales, S., Spickett, J., Katscherian, D., Hshizume, M., Honda, Y., Kim, H., Iddings, S. Naicker, J. Bambrick, H., McMichael, A.J. & Ebi, K.L. (2016). Health Impacts of Climate Change in Pacific Island Countries: A Regional Assessment of Vulnerabilities and Adaptation Priorities. *Environmental Health Perspectives*. 11. 1707–1714. https://doi.org/10.1289/ehp.1509756.

NASA (2011). What Are Climate and Climate Change? October 26. Available: https://www.nasa.gov/audience/forstudents/5-8/features/nasa-knows/what-is-climate-change-58.html (May 16, 2017).

Podesta, J., & Ogden, P. (2008). The Security Implications of Climate Change. *The Washington Quarterly*. Winter 2007–2008. 115–138.

Popovich, N. (2017). Trump's Executive Order Pushes the U.S. Climate Pledge Further Out of Reach. *New York Times*, March 28.

https://www.nytimes.com/interactive/2017/03/28/climate/trumps-executive-order-pushes-the-us-climate-pledge-further-out-of-reach.html (April 15, 2017).

Svendsen, G. T. (2005). Soft or tough guys in Kyoto? Free-rider incentives and the Samaritan's Dilemma. *International Journal of Global Energy Issues*. 23. 281–91. https://doi.org/10.1504/IJGEI.2005.006947

Svendsen, Gert T. (2011). Evaluating and regulating the impacts of lobbying in the EU? The case study of green industries. *Environmental Policy and Governance*. 21. 131–42. https://doi.org/10.1002/eet.567

Svendsen, Gert T. (2013). From a brown to a green economy: how should green industries be promoted? *Environmental Practice*. 15. 72–78. https://doi.org/10.1017/S146604661200049X

The Economist (2009). *Getting Warmer*, special report on *Climate Change and the Carbon Economy*. December 3, 2009. http://www.economist.com/node/14994872 (April 15).

UN (2017). Faced with 'clear science, real threats,' countries must remain committed to Paris climate deal. *United Nations*. Sustainable Development Goals. March 23, 2017. Available:



http://www.un.org/apps/news/story.asp?NewsID=56405#.WjpQXbfiZpg (May 3).

UNFCCC (2005). Climate Change and Small Island Developing States. *Climate Change Secretariat*. Available: http://unfccc.int/resource/docs/publications/cc_sids.pdf (May 3, 2017).

UNFCCC (2015). *Paris Agreement*. United Nations Framework Convention on Climate Change. Available: http://unfccc.int/pdf/english_paris_agreement.pdf (May 3, 2017).

Vitousek, S., Barnard, P.L., Fletcher, C.H., Frazer, N., Erikson, L. & Storlazzi, C.D. (2017). Doubling of coastal flooding frequency within decades due to sea-level rise. *Scientific Reports*. 17 (1399). 1–9. https://doi.org/10.1038/s41598-017-01362-7.

Vogler, D. (2016). Climate Change in World Politics. In David Elliott (Ed.), *Energy, Climate and Environment* (pp. 1–211). New York, NY: Palgrave Macmillan. https://doi.org/10.1057/9781137273413

Wallbott, Linda (2014). Keeping discourses separate: explaining the non-alignment of climate politics and human rights norms by small island states in United Nations climate negotiations. *Cambridge Review of International Affairs*. 27(4). 736–760. https://doi.org/10.1080/09557571.2014.948384

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