2022 International Law of the Sea Moot Court Competition

Case Concerning Iron Fertilization in the Eleanor Sea

(The Republic of Futuna v. *The Kingdom of Ellis)*

1. The Kingdom of Ellis (Ellis) is a developing medium-size State situated on the western margin of the Eleanor Sea. The coastline of Ellis is characterized by the predominance of low-lying coastal areas, which have progressively been affected by climate change. As a traditional fishing nation, Ellis' fishing industry has played an important role in the domestic gross product of the country, particularly due to the exports of the Elea cod. However, in the last 20 years, Elea cod stocks have been depleted, causing a major concern on the local authorities. There is a broad domestic consensus that something needs to be done urgently to support and save the fishing industry. While differences of view exist, the majority of the Ellisian fishing experts agree that climate change plays a major role and disrupts the Eleanor Sea ecosystem.

2. The Republic of Futuna (Futuna) is a State situated on a continent far away from the Eleanor Sea. Futuna is a developed country with a vibrant and diversified economy, hosting some of the worldwide leading companies in various sectors, ranging from chemical and pharmaceutical to high-tech ones. At least since 1992, Futuna has been playing a leading role in the United Nations fora calling for improved environmental protection and sustainable development. Several governmental and non-governmental organizations (NGOs) of Futuna are active members of the International Union for

Conservation of Nature on subjects such as climate change, nature-based solutions, and ecosystem management.

3. Ellis ratified the United Nations Convention on the Law of the Sea (UNCLOS) on 16 June 1996, and Futuna did so on 20 February 1999. Pursuant to article 287 of the UNCLOS, both States have declared upon ratification that they choose the International Tribunal for the Law of the Sea (ITLOS) for the settlement of disputes concerning the interpretation or application of the Convention. Ellis and Futuna are also parties to the following treaties: the 1969 Vienna Convention on the Law of the Treaties, ratified by Ellis on 24 June 1971 and by Futuna on 10 October 1970; the United Nations Framework Convention on Climate Change (UNFCCC), ratified by Ellis on 16 May 1994 and by Futuna on 4 March 1995; the Kyoto Protocol to the UNFCCC, ratified by Ellis on 10 April 1999 and by Futuna on 29 May 2002; the 2015 Paris Agreement to the UNFCCC, ratified by Ellis on 22 June 2016 and by Futuna on 17 September 2016; and the Convention on Biological Diversity (CBD), ratified by Ellis on 30 June 1994 and by Futuna on 3 August 1993. Ellis and Futuna also ratified the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention, LC), respectively on 12 November 1993 and 20 October 1985, as well as the Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Protocol, LP), respectively on 17 May 1997 and 19 February 1997.

4. At the consultative meetings to the London Convention and to the London Protocol, Ellis consistently expressed its opposition to LC-LP resolutions dealing with marine

geoengineering and iron fertilization. On 18 October 2013, when Resolution LP.4(8) entitled “Amendment to the London Protocol to Regulate the Placement of Matter for Ocean Fertilization and other Marine Geoengineering Activities” was adopted, Ellis issued a strong statement contesting its adoption and calling into doubt that the scope of the London Convention and London Protocol covers marine geoengineering and ocean fertilization and that these treaties are adequate to address these issues.

5. On 3 April 2005, Ellis made a submission to the Commission on the Limits of the Continental Shelf (CLCS), and claimed an extension of its continental shelf beyond 200 nautical miles, which included the Gama Rise, a major geological feature in the Eleanor Sea. According to Ellis, analysis of the data and information collected demonstrates a natural prolongation and geomorphological continuity between the Ellis landmass and the Gama Rise. On 4 May 2008, the CLCS adopted recommendations regarding Ellis' submission. However, the geological and geophysical information and data used by Ellis to determine the incorporation of the Gama Rise as part of Ellis's continental margin – almost 15 per cent of the area claimed by the country – was inconclusive thus not supported by the CLCS.

6. On 10 August 2010, Ellis made a partial revised submission to the CLCS. Ellis provided new data and analysis from surveys on the Gama Rise, and strengthened the claim to incorporate the Gama Rise within its continental shelf beyond 200 nautical miles. On 12 September 2014, the CLCS issued new recommendations, again, not accepting Ellis’s claim to incorporate the Gama Rise as part of its continental margin. The

Permanent Mission to the United Nations of Ellis addressed a Note Verbale to the Secretariat of the United Nations expressing its regret and disapproval immediately after it received the new recommendations.

7. On 1 February 2015, Ellis deposited with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf beyond 200 nautical miles, and a few weeks later with the Secretary-General of the International Seabed Authority. The charts and relevant information deposited by Ellis included the entire Gama Rise within its continental shelf.

8. According to some scientific studies published in international referenced journals, climate change has led to a decline in marine plankton populations in the Eleanor Sea and this phenomenon may be related to the decline of fish stocks and the Elea cod population in particular. Successive Ellis' governments continuously encouraged and supported scientific research to deal with the adverse impacts of climate change, especially those on fishing stocks. In that sense, marine geoengineering, including ocean iron fertilization, gained traction among some Ellisian scholars and high-level authorities.

9. On 8 November 2017, Ms. Kaley Sutkino, Minister of Science and Technology of Ellis, invited local and international press, and announced to them that government-financed laboratories had made significant progress in experiments for stimulating phytoplankton growth. Ms. Sutkino also added that the government was seriously considering to make a practical step and hire a company to conduct iron fertilization experiments in the

adjacent sea area of Ellis. Ms. Sutkino's message caused a massive international repercussion. Immediately, several NGOs expressed their concern as well as other governments, among them the government of Futuna. The latter voiced its grave concerns about the iron fertilization experiment in the Eleanor Sea in the strongest terms.

10. On 5 July 2019, Ellis's Environmental Protection and Sustainable Development Agency (EPSDA) granted a permit to Poseidon Inc., an enterprise registered in Ellis, for planning and implementing an ocean iron fertilization experiment in maritime areas under its jurisdiction, the so-called "Project Tera". The Ministry of Science and Technology and EPSDA released a joint statement to the public, part of which reads as follows:

> Considering *the current impact of climate change to its country and population;*
>
> Considering *the need to meet the goals of the 2015 Paris Agreement, in particular the target to limit global warming to well below 2, preferably 1.5 degrees Celsius, compared to pre-industrial levels;*
>
> Concerned *about the absence of any legally binding mechanism to regulate the placement of matter for ocean iron fertilization;*
>
> Noting *the environmental impact assessment report submitted by Poseidon Inc.;*
>
> Affirming *that the goal of the "Project Tera" is to stimulate phytoplankton growth to mitigate climate change;*
>
> 1. Agrees that *the "Project Tera" proceeds as scheduled*;
>
> 2. Affirms that *the environmental impact assessment report has been submitted*;

Stresses that *assessment and monitoring shall be conducted as the project progresses, especially on the processes and consequences, with a view to potentially increase the sequestration of carbon dioxide*.

11. “Project Tera” was carried out in three stages as planned. In the first stage, conducted in December 2019, Poseidon Inc. dispersed 20 tons of iron dust in the closed core of a cyclonic eddy located around 50 nautical miles from the eastern coastline of Ellis. In the second stage, in July 2020, 100 tons of iron dust were released around 150 nautical miles from the original landmark. In December 2020, in the third and final stage, Poseidon Inc. dispersed 200 tons of iron dust around 250 nautical miles from the east coastline of Ellis, i.e., in the Gama Rise area.

12. A few days after Poseidon Inc. ended the third stage of the “Project Tera”, Ms. Sutkino assembled once again the local and international press and shared some preliminary results with them. At that opportunity, Ms. Sutkino celebrated the “Project Tera” as “a major achievement, not only for Ellis, but for all humankind”, since it provided an effective response to the harmful effects of climate change. Ms. Sutkino concluded her remarks by saying that the “Project Tera will make history as the first truly ocean-based experiment to sequester carbon dioxide from the atmosphere”.

13. As soon as it was aware of the completion of the first stage of “Project Tera”, the Ministry of Foreign Affairs and the Ministry of Environment of Futuna released a joint statement in which they emphasized the high level of scientific uncertainty surrounding

ocean fertilization, potential harm to the marine environment, and stressed the need for compliance with international agreements, especially the London Convention and the London Protocol and subsequent resolutions adopted under these instruments.

14. After the second stage of "Project Tera" was completed, the satellite images collected by the National Space Bureau of Futuna showed impressive growth in phytoplankton around 150 nautical miles from the east coastline of Ellis. These images also indicated a trend that phytoplankton was progressively moving eastward. Based on such information, the Ministry of Environment of Futuna released a new statement reiterating its concern about the developments of "Project Tera".

15. Near the starting date of the third stage of "Project Tera", numerous environmental NGOs called for an immediate halt of the project. But the third stage of the project was implemented as scheduled. As a result, these environmental NGOs criticized the "Project Tera" even more ferociously than before and started calling for an international investigation into the potential irreversible destruction of the marine environment and biodiversity in the Eleanor Sea. Some of Futuna's governmental authorities endorsed such views and supported future initiatives.

16. On 12 February 2021, the Ministry of Environment of Futuna assigned the Maximilian Brava Institute, a famous national research center, the task to conduct an extensive investigation of the "Project Tera" both with regards to its impacts on the marine environment and its capability of sequestering carbon dioxide.

17. On 27 April 2021, the *Ardarnia* – a Futunan flagged vessel hired by the Maximilian Brava Institute – left the port of Tema in Futuna heading to Eleanor Sea, with a first stop scheduled for the Gama Rise area. Since Futuna considered that the Gama Rise was in an area beyond national jurisdiction of any State, the country did not seek authorization from Ellis to conduct research activities in the said area.

18. On the morning of 2 May 2021, while the *Ardarnia* was completing around 40 hours of research in the Gama Rise area, a coastguard ship of Ellis, the ECG-5893, made visual and auditory signals to the *Ardarnia* and demanded it to leave the area immediately. When the *Ardarnia* refused to do so, the EGC-5893 approached, boarded, and arrested the ship, which was subsequently guided to the nearest port of Ellis for further inspection and investigation. The *Ardarnia* and its 18 crewmembers were released 24 hours later and allowed to return to Futuna.

19. On 4 May 2021, the Foreign Ministry of Futuna lodged a formal protest to Ellis for violation of the freedom of marine scientific research on the high seas enjoyed by the *Ardarnia* in the Gama Rise area and for the unacceptable arrest and seizure of the ship and detention of its crew.

20. On 5 May 2021, the Ministry of External Affairs of Ellis released to the press a statement stressing that the Gama Rise is part of its continental shelf and, consequently, subject to its exclusive jurisdiction. The statement also highlighted that the activities conducted by the *Ardarnia* were interfering with the promising results of the "Project

Tera", which was motivated by a pressing need to sequester carbon dioxide from the atmosphere and thereby reduce global warming for the benefit of all humankind.

21. According to some Futunan experts who had boarded the *Ardania*, preliminary results of the limited information gathered in the Gama Rise area provided mixed and worrying results. On the one hand, compared with the satellite images collected by Futuna, it indeed showed an impressive phytoplankton bloom in the area. On the other hand, a significant amount of this phytoplankton was detected to contain diatom *Pseudo-nitzchia*, which produces domoic acid, a neurotoxin that can kill mammals and birds and can be introduced into the food chain via the Elea cod.

22. Considering that the data collected by the *Ardarnia* was inadequate for a full assessment of the iron fertilization experiment in the Eleanor Sea, but also trying to avoid a possible new incident with the Ellis coastguard, the authorities of Futuna decided to take a different approach. On 4 June 2021, they sent the *Discoverer*, an oceanographic surveillance ship of the Futunan Navy, to Eleanor Sea with the mission to deploy a new and highly sophisticated maritime autonomous vehicle (MAV) in the Ellis' exclusive economic zone to gather broad scientific data from all the stages of the "Project Tera". On 9 July 2021, immediately after releasing the floating MAV into the Ellis' exclusive economic zone, the *Discoverer* left the area and returned to its base port. The MAV released by the *Discoverer* in the Ellis' exclusive economic zone is 16 meters long, 4,20 meters wide, and its engines are operated by fixed pitch propellers. It can reach speeds of 20 knots.

23. On 14 July 2021, the coastguard of Ellis detected and removed from the water of its exclusive economic zone the MAV deployed by the *Discoverer*. As soon as the Navy of Futuna became aware of this fact, it demanded the return of the MAV, which flies the flag of Futuna, and, in Futuna's view, was only performing internationally lawful uses of the sea in the Ellis' exclusive economic zone.

24. However, Ellis's authorities refused to return the MAV to Futuna and alleged that this "unmanned object" had endangered the safety of navigation and Ellis was entitled to remove it from the water. Moreover, although flying the flag of Futuna, Ellis believed that this "unmanned device" was neither a vessel nor a ship, and was conducting marine scientific research in its exclusive economic zone without its prior authorization.

25. After the incident with the *Ardania* and its crew, followed by the seizure of the floating MAV, and seriously concerned with the potential worsening of the situation as well as with the irreparable damage to the marine environment caused by the "Project Tera", Futuna decided to initiate proceedings against Ellis pursuant to Part XV of the UNCLOS.

26. On 15 August 2021, being a State party to the UNCLOS, and motivated by the urgent need to find a peaceful resolution of the dispute between it and Ellis, Futuna submitted an application to the ITLOS requesting the Tribunal to adjudge and declare:

(1) Gama Rise forms part of the Area, since Ellis has not established the limits of the continental shelf on the basis of the recommendations made by the CLCS;

(2) Ellis has breached its obligations relating to the preservation and protection of the marine environment under the UNCLOS, other relevant international conventions and general international law by conducting ocean iron fertilization activities in the areas both within and beyond 200 nautical miles from the coast of Ellis;

(3) By interfering with the activities conducted by the *Ardarnia* and the arrest and seizure of the *Ardarnia* and the detention of its crew, Ellis has infringed Futuna's freedoms of marine scientific research and navigation on the high seas;

(4) Ellis has violated the freedom of navigation, sovereign immunity, and other internationally lawful uses of the sea, including the operation of marine autonomous vehicles, enjoyed by all States in the exclusive economic zone of other States.

27. Ellis respectfully requests the ITLOS to find that the Tribunal does not have jurisdiction over the case, or the submissions of Futuna are inadmissible. In case the Tribunal decides otherwise, Ellis asks the ITLOS to reject each of the four submissions made by Futuna.