FORUM: Environment Commission

QUESTION OF: Measures to Combat the Spread of Urchin Barren

MAIN SUBMITTER: Democratic People’s Republic of Korea

CO-SUBMITTERS: United States of America, Russian Federation, Republic of Korea, Netherlands, Iran, Bangladesh, People’s Republic of China, United Kingdom, Libya, France

THE ENVIRONMENT COMMISSION,

*Approving* of the United Nations’ Sustainable Development Goal framework, goal number 14 of which aims to advance responsible and sustainable use of the ocean and ocean conservation,

*Believing* that the endangerment of kelp forests is directly related to ocean conservation as a whole,

*Alarmed* that over 95% of some kelp forests have been destroyed as a result of sea urchins,

*Emphasizing* the need for kelp reforestation, the reduction of sea urchins, the introduction of urchin predators, and other such measures,

*Concerned* that the loss of kelp forests leads to increased habitat loss and lack of biodiversity, and more carbon in the atmosphere,

*Noting* that kelps forests have benefits both for marine life and human life, in maintaining a healthy oceanic ecosystem, producing oxygen, eliminating large amounts of carbon from the atmosphere, and providing a home for thousands of marine species,

*Stressing* the effects that climate change and human activity has had on the kelp forests, contributing to their demise as well as the unnatural behavior of sea urchins in consuming an abnormal amount of kelp,

*Believing* that a tremendous factor in kelp deforestation is sea urchins and the rapid rate at which they are consuming kelp and throwing the harmony between themselves and kelp out of balance,

*Convinced* that protecting kelp forests is a realistic and relevant step towards tackling climate change,

1. Calls upon countries that have large populations of kelp forests and urchin barrens to engage in kelp reforestation, utilizing methods including but not excluding:
	1. employing teams in areas where urchin barren is profuse to:
		1. use marine permaculture, such as creating an environment which is effective for the growth of kelps, to stimulate the growth and recovery of kelp forests,
		2. reduce the density of sea urchins by organizing groups of commercial divers to crush large populations of urchins in urchin barrens,
		3. employ the use of quicklime to eradicate large populations of urchin barren,
		4. utilize hard substrate and artificial coral to mimic a kelp habitat and provide opportunities for kelp to take root and grow,
	2. forming research groups that would work to improve ocean water quality and create an ideal environment for kelp to thrive in by:
		1. utilizing aquaculture in ways such as cultivating shellfish, fish, and seaweed farming,
		2. conducting research that explores the most suitable habitat for kelp to flourish in and applying that research in practical ways,
	3. collaborating with organizations such as the United Nations Environment Programme (UNEP) and Ocean Panel to identify areas with kelp forests that are at risk or where urchin barrens are profuse and emphasizing kelp restoration efforts in such areas through means such as but not limited to:
		1. using global kelp density maps like Kelpwatch.org to identify where kelp has high densities,
		2. using historical as well as recent data to gage which kelp-occupied waters have changed the most in temperature, water quality, and biodiversity,
	4. forming kelp restoration teams that would be funded by the government as well as donations that would include:
		1. researchers and scientists specializing in aquaculture, kelp reforestation, marine permaculture, etc.,
		2. professional divers,
		3. community volunteers;
2. Urges member states to respond to kelp deforestation by taking measures to reduce the population of sea urchins, particularly in urchin barrens through means such as but not limited to:
	1. increasing the general population’s consumption of sea urchins as an edible seafood by:
		1. employing commercial divers to remove sea urchins from urchin barrens and transferring them to urchin farms, where they will be nourished back to health and sold as a consumable product,
		2. researching and implementing cost-effective, practical methods to increase the scale and productivity of sea urchin farming on a commercial level,
		3. improving the marketability of sea urchins by propagating the negative effects of sea urchins on kelp forests, propounding the appeal of sea urchin’s, and encouraging the consumption of urchins on platforms such as Youtube, Instagram, and more,
	2. promoting the benefits of using sea urchins as a consumable, which include:
		1. being nutritious by being rich in protein, dietary fiber, and minerals,
		2. their use as an ingredient in cooking, oftentimes either as a direct food or as a soup and sauce thickener,
	3. breeding, researching, and releasing marine animals into the wild that are known to prey on sea urchins and keep their population in check with a natural balance, such as:
		1. sunflower sea stars,
		2. sea otters,
		3. crabs;
3. Encouraging countries to intentionally develop and fund governmental programs and organizations that would work to reduce the threat of urchin barrens through ways such as but not limited to:
	1. conducting experiments and research that revolve around the kelp forests and the causes for their continual decline such as:
		1. identifying the cause of the sea urchin’s unprecedented and erratic behavior,
		2. studying the behavioral patterns of kelp and its different species and how they react to their environment,
	2. innovating new methods and improving existing methods that address urchin barrens such as:
		1. exploring the eating habits of sea otters and other sea urchin predators and implementing ways in which to maximize on their threat to sea urchins while still maintaining the natural balance between prey and predator,
		2. utilizing research in practical ways and innovating new solutions that combat the spread and damages of urchin barrens,
	3. maximizing problem-solving speed and productivity by regularly adjusting goals, setting targets, and using statistics as a mean to gain a numerical understanding of:
		1. where kelp is being deforested and at what rate it is being deforested,
		2. the population of sea urchin predators and the rate at which they are decreasing or increasing,
		3. monitoring the effects climate issues such as heatwaves, rising ocean temperatures, and water pollution have had on the decline of kelp forests and the urchins’ subsequent abnormal consuming of kelp,
	4. partnering with and supporting existing kelp reforestation efforts, universities, and research centers in order to make an impact on kelp reforestation on a larger scale;
4. Asking for countries to increase efforts to emphasize the urgency and importance of the issue of urchin barrens through the spreading of information, through means such as but not limited to:
	1. creating an information database in collaboration with marine research centers around the world that would raise public support in favor of kelp reforestation by:
		1. publishing cost-benefit analyses that show how the benefits kelp forests bring to our society far outweigh the cost of pursuing active restoration of them,
		2. increasing published data that gives insight into the positive benefits kelp contributes to the environment and the economy,
		3. actively share results of kelp reforestation efforts to allow citizens to gain an idea of what is being done to address it,
	2. warning about the dangers of urchin barrens and informing about what can be done using texts including:
		1. newspaper,
		2. books,
		3. pamphlets,
	3. communicating the dire plight of kelp forests through the posting of statistics and news stories on social media platforms including:
		1. Instagram,
		2. Facebook,
		3. YouTube,
		4. Twitter;
5. Encourages countries to find ways to include the younger generation in kelp reforestation and urchin barren reduction efforts through ways such as but not limited to:
	1. emphasizing the importance of the issue through education and collaboration with schools, for example:
		1. inviting kelp and marine specialists to speak at public schools,
		2. organizing field trips, fairs, and other programs that allow students to physically engage with kelp reforestation and gain a better understanding of how they can aid kelp reforestation efforts,
	2. developing government-sponsored programs that are specifically targeted towards youth including:
		1. camps where they can learn about and help the problem of urchin barren,
		2. classes where they can learn about the dangers of urchin barren and what they can do,
		3. trips where they can see firsthand the damages urchins have done to kelps,
	3. partnering with children’s content creators to create cartoons and videos that inform young children about:
		1. Importance of kelps,
		2. Damage of urchins on kelps,
		3. Ways to protect kelps;
6. Requests that countries strengthen efforts to mitigate the problem of climate change on kelp forests, which is a significant factor in the decline of kelp forests, through means such as but not limited to:
	1. employing such methods to make kelp more resilient to heat and thus less prone to declining so rapidly due to climate change as:
		1. breeding and experimenting with certain kinds of kelp in labs so as to increase their genetic diversity and give them a stronger chance of survival and resilience to heat,
		2. introducing kelp with a naturally higher tolerance to climate change into areas of at-risk kelp populations and thus increase genetic diversity in those areas,
	2. collaborating with NGOs and other organizations, such as Ocean Watch Australia, Ocean Panel, and others to reduce water pollution, which negatively impacts the growth environment of kelp forests, such as:
		1. organizing efforts to clean up oil spills and marine debris,
		2. starting initiatives and programs to find and apply solutions to stop plastics, garbage, and other objects at the source from entering the ocean;
7. Calls upon member states to prioritize the implementation of sustainable fishing practices through means such as but not excluded:
	1. creating legislation that takes action against overfishing through means such as:
		1. setting an annual limit on how much fish can be caught in total, and according to different subjects divided into 3 distinct standards (commercial fishers, recreational fishers, customary fishers),
		2. establish the fishing season, which means there are certain months for commercial fishing, mostly from March to October, but it would be different in different temperature zones,
	2. establish a policy to increase transparency in the fishing industry by utilizing the Fisheries Language Universal Exchange (FLUX) standard, which includes:
		1. fishing activity data,
		2. data on fishing licenses, authorizations and permits,
		3. aggregated catch data,
	3. establish legal proceedings like fine imposition and Regulatory penalties administration for overfishing;
8. Asks member states to strengthen the policies that protect marine protected areas (MPAs), which combats overfishing, protecting biodiversity and thus helping the kelp forests remain healthy by means such as:
	1. setting well-defined goals for the protection of marine animals such as:
		1. deciding what level of protection is needed, whether it be partial protection or full protection according to the severity of the area,
		2. establishing which areas need protection depending on the current state of biodiversity and loss of species that overfishing has brought about in those areas,
	2. strengthening cooperation between the local population and the governing body through means such as utilizing the knowledge and experience that people working in the fishing industry have, such as distributors and those in marine and fishing careers,
	3. prioritizing financial stability so that these efforts can continue to be financially supported and not be hampered by monetary issues by utilizing different types of funding, such as:
		1. donations,
		2. environment funds,
	4. establishing the legal framework that enforces the protection of MPAs by specifying the consequences for infringing on the restrictions such as:
		1. fines,
		2. retraction of fishing privileges.