1st Prize / Grand Prize Winner

Complacency Amid Islands

by Darren Tan, aged 17 (Malaysia)

There once was an island. Look again - moments later, there might not be one. Every day, thoughts like these float through the worried minds of the small Polynesian community on Takuu Atoll, much like the miniscule supply boat that has come to symbolize their fate - battered, downtrodden, rocking wildly at the mercy of forces outside their control.

We are that force. Unfortunately, our voices cannot be heard over the din of howling winds which blow in the most politically convenient directions - all while the fates of entire communities in places like Takuu Atoll hang in the balance. Complacency will be the death of our life source - Earth's waters.

It's not that those winds don't care, however - they just don't know. The first step to solving any problem is to understand it. In this case, those who walk the halls of power simply do not understand. Every year, hundreds of representatives congregate at "protect our oceans" conferences and make another dozen "commitments". Less than 2 per cent of them will ever make those stormy journeys on supply boats that carry hope to the Takuu Atolls of the world.

Ultimately, the first step in any enforced solution is for the public to understand the facts underlying the problem. To enhance the global community's understanding of our oceans' importance, information symmetry must be achieved through education. It used to be taken for granted that the global community can and will trust the integrity of scientists and journalists. In the past two years, however, we have witnessed the rise of dangerous fake news, which threatens to derail any progress made towards protecting our waters. For any proposed solutions to work, the global community needs to understand why we must protect the oceans from ourselves and climate change. This is why alternative media organizations should not be allowed to lend legitimacy to conspiracies like "climate change = Chinese hoax". Facts should be prioritized over feelings, and the scientific community needs to help make that happen by engaging in social media campaigns that adapt to the needs of modern media consumers. By regulating and using media wisely, the global community will be sufficiently educated on the facts, achieving information symmetry.

When the public has equal access to information regarding why we must protect and manage our oceans, they will be inclined to vote in governments that work to properly enforce commitments made at marine conferences. The people's voice will encourage their governments to create coherent policies aimed at achieving marine protection targets, such as the Seychelles Blue Economy Roadmap encompassing ocean-based economic diversification, food security, environmental management, and job creation. This way, governments will gain political incentive to work together towards the UN SDG 14 targets by enforcing international climate agreements that also benefit our oceans. Carbon taxes could be used to enforce the Paris Agreement, which would minimize ocean acidification.

Governments could invest more capital into the Global Environment Facility, which funds multilateral marine management plans that have led to marked progress towards UN SDG 14 targets as shown by their respective indicators; or offer tax subsidies to similar organizations like the Global Sustainable Energy Islands Initiative, which helps ocean-based island economies develop their sustainable energy sectors. Endless possibilities for enforcement await the death of complacency.

In essence, there are no limits to what we can achieve if one follows the framework of education first - for it is the very thing the people of Takuu Atoll need their small supply boat to carry. Education is, and will become the embodiment of hope that will temper the coming storm.

2nd Prize (joint)

Our Life-Giving Oceans

by Anisa Esat, aged 16 (South Africa)

Foremost of the 12 Olympians in ancient Greek mythology was Poseidon, god of all the Seas. It's easy to understand why our ancestors venerated the oceans.

They are key to the functioning of earth and its creatures. They provide nutrition up the food chain, a medium for marine life to flourish and potable water for humans through desalination. They enrich us through the incredible biodiversity of its denizens.

El Nino and La Nina! Our oceans' mercurial siblings upon whom we depend for our rain and for our stability and survival. Unbalance them and our reward is disaster through drought, savage tempests, floods and wanton destruction.

The phytoplankton of the oceans produce 50 per cent of earth's oxygen. Oceans are the vast reservoirs that increasingly neutralise the toxins spewed by humanity. Poison them and you poison all of life.

Our Oceans Under Threat:

Allow earth to run dry like Mars, or render its oceans unusable, and you propel mankind to inevitable oblivion. Use all which our oceans have to offer but conserve them and ensure that our methods are sustainable.

Humans pose serious threats to the marine environment including through pollution, overexploitation, global warming and deforestation.

Plastics:

Plastics and micro-plastics poison and kill marine animals and take hundreds of years to biodegrade. We must end our reliance on plastic products and recycle what's there.

Let's invest heavily in water-soluble plastic and other biodegradable ocean-friendly materials such as paper, to replace plastic.

Could Ideonella sakainesis be the unlikely saviour of our oceans from demon plastic? This plastic-eating bacterium was discovered in 2016 by researchers from Kyoto Institute of Technology and Keio University.

Let's pressure our governments and scientists to find a way to mass produce these microbes and populate our landfills in order to degrade the millions of tons of plastic that end up in our oceans.
Let's take to the beaches in clean up brigades to remove decades of accumulated plastic wastes.

Pollution:

Fuel spills (e.g. BP disaster), mercury and chemical pollution from mines and factories affect the oceans negatively. Desalination plants dump salt back into the water. Fishing residues ensnare animals.

Effective policing and prosecution is needed to make polluters pay and clean up. Name, shame and force them to reintroduce the marine species they harm.

The generation, storage and testing of nuclear power, weapons and radioactive wastes in or near the oceans must be banned. Remember Bikini Atoll and Fukushima.

Over-exploitation:

Over-exploitation is rampant. Trawlers trap recklessly. Over-harvesting sea otters, over-killing of sharks and capturing of endangered fish like blue fin tuna are common. Better regulation and closing loopholes in treaties is urgent. Ban unsustainable ocean products (e.g. tortoiseshell accessories and shark fins) and boycott them.

Endangered fish must be repopulated though a fisheries programme and exploiters should be made to pay through license fees and special taxes.

Global Warming:

Global warming causes acidification as greenhouse gases alter the ocean's PH bleaching coral reefs whilst melting ice caps affect marine life. Let's conclude treaties that decrease our carbon footprint and support civil groups such as Awaaz to lobby for action.

Urbanisation and Deforestation:

Urbanisation around coasts destroys natural habitats and e.g. turtles and salmon can't get to their nesting grounds.

Deforestation causes soil erosion, sedimentation of reefs and destruction of marine habitats. Let's preserve and grow trees along our coasts.

Blue Planet:

This is my plan for achieving the "blue economy", where we'll create an earth, gushing with every shade of blue. Until then, we mustn't let the oceans spill red with the blood of animals that don't have a voice of their own to plead for us to stop.

2nd Prize (joint)

My plan to protect and manage our oceans, seas and marine resources

by Anastasiya Yarkova, aged 15 (Russian Federation)

Nowadays there is a huge growth of the world population, which leads to the increase in demand for foodstuffs and energy. Development of cities and tourism, pollution, oil and chemical spills, loss of biological diversity and the extermination of fish are negative factors of the impact of the modern humanity on the marine and coastal environment. Climate change has also a negative impact on the marine resources.

To begin with, the governments of many countries and world communities seek to reduce marine and land-based sources of pollution.

However, it is impossible to solve any problem excluding only the consequences of harmful effects. Therefore, my plan is to eliminate the causes of this impact to protect and manage our oceans, seas and marine resources.

To solve this problem, I suggest involving children and adolescents more actively in achieving such a strategically important goal of the development of all humankind. It seems to me that if today we can create a positive culture of environmental safety for children, tomorrow we will get a whole generation of ecologically and environmentally responsible engineers, oil workers, biologists, designers, educators and just citizens of our planet.

In addition, I propose to develop an international programme to engage children in the protection and water resources management. The program should include activities to inform, motivate and organize feedback. The goal is to develop ecological literacy, education, environmentally conscious behavior of children and adolescents.

Secondly, it is necessary to create a system to assess the level of the culture of environmental security development. It is necessary to determine the list of the main characteristics of the ecological safety culture, their weight coefficients and the values of indicators by the method of expert assessments. This will allow us to calculate the level of development of the culture of environmental safety in different regions, analyze the dynamics of this level change over the years. Further, it will be possible to identify the most unfavorable zones and offer targeted programmes to increase the level of the studied indicators.

Thirdly, truly enough, it is necessary to monitor all water resources as a single ecological system, so, I plan to create a single international information portal, which will reflect not only the most problematic sites and cleaning projects, but also information on their research. The system for interstate monitoring of water bodies should help create a monitoring data bank. It is equally important at the international level to ensure the availability of this data to all interested people.

I believe, it is a bright idea to develop an interactive electronic information map for the protection and management of marine resources for any user to enter the results of monitoring and description of the activities carried out.

However, there is a threat of negative impact of water, which should also be managed by humankind.

A single international database will allow forecasting the likelihood and consequences of such negative impacts (flooding, ice dams), as well as improving the effectiveness of preventive measures taken. The creation of a common international communication system for promptly informing and alerting the state of water bodies and threats of negative water impact will save the lives of many people.

To sum up, a specialized international site will unite a large number of environmental studies conducted in different countries and published in various publications. This information source will allow to exchange news and make management decisions quickly and effectively. If my plan to protect and manage our oceans, seas and marine resources makes think about the existing problem even a dozen people, our planet will have a happy future.

3rd Prize

Save the Ocean

by Alexandria Slaven, aged 12 (Samoa)

Ocean v. Humanity
Earth Court,
World Circuit, 2017

FACTS The Ocean is the plaintiff. Humanity is the defendant. Jury is the future generation. Ninety-Eight percent of the biosphere is Ocean, home to the greatest diversity of life on Earth. 50 to 70 per cent of our oxygen comes from the ocean, which is more oxygen than all the rainforests combined. The Ocean regulates temperature, absorbs 80 per cent of climate change heat and 50 times more carbon than the atmosphere. The Ocean gives medicines that help treat heart diseases, cystic fibrosis and cancer. Humans need healthy oceans to support their way of life, it also gives economic opportunities from transport, mineral and recreation. Fish are worth more to humanity than gold. Over one billion people worldwide rely on fish for protein and half a billion people count on the oceans for their livelihood. Eighty percent of fish stocks are overexploited. Ninety percent of the top predators have disappeared from overfishing. Every year 14 billion pounds of trash is being dumped in the ocean, plastic constitutes 90 per cent of trash floating in the ocean, breaking into smaller pieces ingested by species causing illness and death to one million marine animals and birds each year. The Ocean sustains mangroves, wetlands and coral reefs that protect humanity from disasters. Ocean filed suit against Humanity and others, alleging, in part, that the production and littering of trash is harming life as we know it, which also violates Ocean's rights as citizen of Earth. Humanity makes about 2.5 billion tons of waste in a year. The court issued a judgement in the plaintiff's favour.

ISSUE Does the Ocean have rights to protect her marine inhabitants? Is Humanity over-consuming resources causing substantial pollution killing many species?

DECISION YES. The Jury-Future Generation has found the defendant, Humanity, guilty in the first degree solely responsible for Ocean pollution. The court found in favour of the Ocean's request to stop trash from entering her waters by cutting down waste and expand recycling programs to accommodate plastics and waste material.
Sentencing for Humanity's crime to help save the Ocean:

1. Pass a national recycling law for the sustainable recycling of plastics and to manage waste on land, where 80 per cent of trash originates. This will require every business and commercial site to recycle.
2. Ban single use plastics, microbeads and techniques for fishing like bottom trolling that harm the Ocean.
3. Corporation (contributing to ocean pollution) with annual revenue exceeding a high profitable amount, donates 5 per cent of their net profit to ocean cleaning charities.
4. Tax increase for all sale of seafood and plastic products.
5. Less tax for companies embracing clean energy and other solution that help address the pollution crisis.
6. Design plastic biodegradable packaging and that no plastic becomes waste.
7. Litter booms set up at the mouth of every river coming downstream.

REASON We have pushed Mother Nature to a breaking point, it's up to Humanity to pay for their crimes. Now, Ocean needs us. It's our moment of truth.

4th Prize

My plan to protect and manage our oceans, seas and marine resources

by Surma Saif, aged 15 (UK)

Our planet is fragile. Our lives depend on a balance of nature that keeps our environment stable for us and the living things around us to exist. Crucial to this balance is our oceans. Would you believe that the oceans hold 97 per cent of our planet's water? They even produce over 50 per cent of oxygen in the atmosphere and absorb the majority of the carbon dioxide. Furthermore, the ocean handily regulates our climate for us moving heat from the equator to the poles, which is why our weather is so mild. The life in the oceans supply us with food, and even medicinal products which help fight cancer, arthritis, heart disease and Alzheimer's disease. Additionally our oceans provide us with unique recreational activities ranging from fishing to whale watching. Yet we treat this valuable resource as a convenient dumping ground as civilisation progresses rapidly around the world.

Many things have contributed to the rapid advances of human civilisation. For years, people had been trying to create a material which is durable, cannot decay, easy to shape and cheap to produce - a material that would truly influence every industry. Plastic. Today 322 million tons of plastic are produced every day. But the very things that made this material useful, its robustness and persistence, now is a problem. As these things are used, they eventually need to be disposed of, thrown away into landfills and oceans where it will last for centuries.

In the oceans, plastics continue to cause damage which affects ocean life, the humans that depend on it and eventually the whole planet. This same material is the one which kills millions of animals every day due to toxins entering their bodies or being trapped inside your Cola bottle that you couldn't be bothered to throw in the bin. Microplastics are tiny particles of plastic in many things from makeup to medicine. These are easily absorbed by small oceanic creatures and work their way up the food chain to bigger fish, their predators and even humans where they continue to accumulate. As we poison our oceans we are poisoning ourselves.

So what is the answer? There is no single answer, but I would suggest three factors are crucial.

Research, Education and Law.

Research can give us new plastics that are biodegradable. We can monitor the spread of the plastic, and study ocean flow patterns. You could look at the ocean as if it was a huge fish tank. Aquarium filters remove physical and soluble chemical waste products from the area to simplify maintenance. Now what if we applied these same techniques used to clean out a fish tank on a larger scale? My plan to protect and manage the oceans rely on the many narrow spaces the ocean travels through. If we placed large filters in these narrow gaps, over time all the ocean would have crossed a filter and be clear of the plastic waste. This process of clearing the oceans would take many years however considering that over 8 million tons of plastic is dumped into our oceans annually, this would make a huge difference.

It is crucial that everyone is educated on the importance of our oceans and what they can do to help as no machine can pick up debris as quickly as humans are dumping it. Recycling, and conservation should become second nature to all of us.

International law and cooperation is vital. 30 years ago, a law which forbade the dumping of plastic into the oceans was enforced however according to the Ocean Conservancy, Asian countries including the Philippines, Thailand and Vietnam are dumping 60 per cent of the plastic waste entering the seas.

Change is needed to prevent a spiralling decline of our planet. Our oceans are so vitally important yet in the last century we have entered a path that could eventually irreversibly damage this resource. Our world faces a decline of human making, and only humans can fix it.

5th Prize (joint)

My plan to protect and manage our oceans, seas and marine resources

by Valeria Farah, aged 15 (Chile)

71 per cent of the surface of the planet is sea, and even then we are not able to worry about its overexploitation and pollution.

The oceans, as well as all marine waters, are in danger. Historically, they have been a natural pathway of integration, to create the history that defines us as humanity, and a living ecosystem that we have left in the background. So much so that, of the 8,300 million tons of plastics used in 2017, almost 80 per cent of them are not recycled, and much of it goes to the sea; affecting its flora, fauna and ourselves. We must be more aware of the opportunities and resources that the seas and oceans offer us, to commit ourselves to caring for and enhancing that gift of nature that allows our life on earth.

This change in mentality must be profound, with education being the basis for this. An education with content, skills and attitudes, but also with values, because an education without values has no value. The environmental crisis goes beyond knowing that something is wrong, but the solution calls us all and we must collaborate to finish it. We must take action on the matter and propose initiatives that allow for the improvement of the problems in our seas.

How will we protect our oceans?

Learning communities
Through different procedures initiated since childhood, we teach students to become "citizens of the sea", promoting attitudes that value, for example, the great amount of resources that the oceans give us. Over time, the students that advance in the course will mentor the youngest, encouraging mutual learning. They will also implement mechanisms to help protect and manage marine resources; such as encouraging the use of reusable bottles and bags.

S.T.E.M.
The use of "S.T.E.M." approaches (science, technology, engineering and mathematics) as a way to educate young people to not only become aware, but also act on creative and attentive solutions for the challenges that our seas present to us. For example, the UC Marine Conservation Center developed a program to create urban "graffiti" to educate schoolchildren and sensitize the community about ocean care.

Communication networks
There are already enough islands in the world, let's not make a new one. We must create support networks between schools near the coasts with those that do not have access to it, so that they share experiences and initiatives that empower young people to be part of the ocean. The "ambassadors" of the coastal schools can have an "oceanic passport" that identifies them as maritime citizens, so that the message they deliver will carry as much responsibility and dedication as possible. This will contribute one of the objectives of UNESCO for the 21st century, the formation of a global citizenship.

Raise awareness
Education actions should be implemented in coastal communities in order to make the extraction of marine resources sustainable so as not to undermine the over-exploitation of species, promoting the cultivation of different products in different areas of the sea.

Cultural changes take time, which is why we should start now. The biggest challenge and responsibility that we have left, is to internalize the maritime problems, their effects and solutions in value-based education, so that we give purpose to our actions and generate a shared sense of belonging. If we want to protect and manage ocean resources, education is our main weapon. Do not forget that you only want what you know, and you take care of what you want.

5th Prize (joint)

My plan for preserving and sustainable using of ocean and sea resources

by Vladimir Madzarevic, aged 13 (Serbia and Montenegro)

The whole world is familiar with the ecological issues our planet is faced with. Man as a unique being does not only neglect his foremother, the ocean, but he also pollutes it, ignores it and destroys it. In that way, he breaks life cycles in which oceans play the important role by interfering with the laws of nature and food chains. Fishing excessively, he pollutes the environment and destroys many species, also putting himself in danger. Many sea creatures existing for millions years, including plankton, tuna, sharks and blue whales, are now in jeopardy.

The protection of the ocean has been a very popular topic in the media in the recent years. Many steps have been taken, but unfortunately the situation is getting worse. Obviously, adults are neither willing nor able to solve the problem. How many times has it happened to you that, instead of diving and marveling at colorful starfish or clams, got caught in a plastic bag, came across some nylon, found the sea bottom covered with all kinds of waste, or got out of the water coated with some chemical or oil! It's time for young people to drew attention to importance of saving the oceans, and came up with ideas and suggestions before it's too late.

As a responsible citizen of the Earth, I would like to invite all my peers around the world to help me achieve this plan:

First of all, I would suggest forming the Club of Young Oceanologists (CYO) within the ecological centre The Living Rainforest. We would immediately address the United Nations in order to adopt the declaration of the blue sea protection (Big Blue Declaration). The Declaration would be neither long nor detailed, but it would include the instructions on what could be done so as to reduce the sea pollution (outflowing of waste water in the rivers which ends up in the sea, disposing of harmful and radioctive waste, using fertilizers, building hotels on the sea coasts etc.) and decrease the destruction of wildlife and marine habitat (excessive fishing, illegal whaling and hunting other marine animals etc.). The content of the Declaration would be written by the team of experts joined with us, volunteers gathered in the CYO.

Secondly, the one who committed any detrimental, prohibited or environmentally unfriendly act should be identified and punished.

We would set up the International Oceanic Police which would not only prevent the harmful activities that might endanger ocean and marine habitat, but also charge the fees. By using the modern technologies, there would be no difficulties in prooving that someone broke the law. The International Oceanic Police would keep in touch with the CYO, so they would immediately know the current state of the ocean, and which parts of it are at risk in order to take further measures for the damage recovery.

We would found the International Oceanic Stations on the ships laboratories, where the CYO and scientists would try to detect the level of threat of ocean wildlife. Those stations would work all year round, contributing to the protection and renewal of the ocean biodiversity.

I would be truly happy if my plan was accepted by the United Nations and recognised by all governments around the world which would accordingly provide us with scientific, financial and ecological support. The leaders of this initiative would be eminent scientists and us representatives of the CYO.

In order to see this happen it is of vital importance to engage young people who would never neglect the alarming condition of the ocean and the sea. And those would be my friends and me!