



NISSAKU TIMES

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How to turn the sea

The sea environment is being destroyed. This is because the measures are delayed. There are people who think Marine debris will disappear soon but plastic will remain in the sea for 450 years. Throwing the plastic away will have bad effects for all generations. Human should reduce Marine debris to hold on the sustainable life.

From the viewpoint of plastic bottles, people can stop buying drinks in plastic bottles, but

instead, they can bring their own tumblers. You can buy those from 1000 yen, so please buy it. It's good to do something surprisingly familiar. There is also the deposit system. It is introduced in many countries, and the deposited money returns by recycling plastic bottles. Most of marine debris are occupied by plastics. The half of them is said to be abandoned artificially by human beings. But an exception is that plastic bags account for only 1.3%.



By: Ishihara Yuto, Takase Satoshi, Kurota Yusei, Kitaguchi Saki, Mochiduki Yura, Ota Hitomi, Oyama Yuki

Consciousness Matters

What do people think is the most important in the SDGs initiative? There are various efforts being made in domains as poverty, gender equality, and efforts to eliminate human and national inequalities. Every goals matters equally.

Therefore, the students of Nihon University Sakuragaoka High school discussed several ways that they can do to approach to the goals of the SDGs, which are easy to practice in their daily lives: raising consciousness for the garbage-related issues.

Solving the garbage problem requires many efforts. An example is marine debris. It is said that 20,000 to 60,000 tons of marine debris are discharged from Japan every year, which is ranked to be 30th in the world. If marine debris can be reduced, it can contribute to goal 14, the protection of the abundance in SDGs.

Another garbage problem concerned in Japan is food loss. Japan's food loss for an individual is said to be 133.6kg per year. Humans are kept alive thanks to plants and animal. That is to say, when they produce food loss, that causes life loss.

Throwing food away is just like wasting many lives. This problem is proclaimed in the 12th goal of SDGs, Responsibility to make, Responsibility to use.

What can people do about these two major problems? One way for an individual is not to buy too much and understand the values of things. These may be two small things, but just by being conscious in people's daily life, it casts light on this problem. It is necessary for people to change their consciousness, so that they can move on to a bright future.

Air Pollution during Garbage Disposal

We usually take out the garbage on garbage-collection days. The garbage is then burned, discharging CO2 and other environmentally harmful gases from landfills. Although the amount of gases produced in Japan are said to be less than other countries in the world, we believe that continuous efforts should be made. This issue leads to the 11th goal in SDGs, building a town where you can continue to live, and the 15th, protecting the richness of land. The garbage problems require a

lot of efforts.

So, what exactly can we do? Carrying an eco-bag, minimizing the purchase amount, and separation of garbage are some of the easy ways to get involved. In addition, by reviewing and paying attention to the efforts made under the SDGs in local communities and local governments, people may realize that there must be many other things people can do. To achieve SDGs, although continuous efforts by companies

are indispensable, people need to act individually to protect the environment.

By: Yamaguchi Mimori, Suzuki Koharu, Kudou Haruka, Sugawara Kaito, Koyama Yudai, Mizoroki Io, Kamata Toshiki



Agricultural Challenges in Global Warming

The 13th goal of the SDGs is to take urgent action to combat climate change and its impacts. It is said that the world's temperature is increased by an average of about 0.85°C degrees from 1880 to 2012. The average temperature increased by about 1°C degree in Japan. This is the fastest warming we've ever experienced. As a result of the rise of the temperature, various problems occur on Earth and our lives.

Impact of Global Warming

On the road, you may be hit by strong winds on bridges or at the exit of tunnels. As the eyes of the typhoon approaches, it becomes a fierce southerly wind, and after the eyes of the typhoon have passed, the wind from the opposite north may blow back strongly.

Relationship between Typhoons and Global Warming

The number of days with daily precipitation of 100 mm or 200 mm are increasing.

This tendency for heavy rainfall increase is common not only in Japan but also in a wide range of East Asia. It is suspected that global warming and the accompanying increase in water vapor volume have contributed to such global fluctuations. At the end of the 21st century, according to the regional climate model, it expects more precipitation in the month.

Agriculture and Global Warming

Global warming affects agriculture. Poor fruit coloring and sunburn in fruit trees, and the outbreak of pests are one of those effects. Agriculture has promoted breeding for a long time for paddy rice, vegetables and fruit trees with the aim of increasing added value. What is more, in recent years, plants that are resistance to high temperatures has become an important factor in breeding. Producers respond well to the damage caused by the weather and climate, and realize a stable supply to the market. Thanks to such efforts, they can

provide pinpoint and high quality supply, even for the period when large demands are expected, such as New Year and Christmas.

Such ways of breeding technology are now adapted to some measures for stable production of plants in global warming environment. On the other hand, under the situation where a certain temperature rise is unavoidable in the future, it is possible that crops that were previously difficult to cultivate due to the cold climate can be cultivated. Since the impact of agricultural products varies from region to region, it will be important for the region to take effective measures against future climate change impacts.

What We should do to Coexist with the Environment

In the world, international measures to protect the environment are underway. The Paris Agreement, which was established in 1997, sets forth international efforts to reduce greenhouse gases. 55 countries,

including developing countries, signed the Paris Agreement. If they reduce carbon dioxide emissions, they can prevent the temperature from rising and balance it with plants. It is also important for each of us to take whatever measures we can. For example, you may lower the temperature of your air conditioner by one degree, or use your own bag. Carbon dioxide is produced when people consume energy. We need to think about the future and start to act.

By: Nonoka Suzuki, Yuuma Sekiguchi, Ayato Kawasaki, Yuuki Nakadai, Shohiro Cho, Haruna Matsui, Kyoko Endo



<https://sdgs-support.or.jp/>

The Impact of Air Pollution

About a half of the world's total population lives in urban areas, and it is estimated that it will reach to 70% by 2030. Infrastructure has already reached its limits not only in developed countries but also in some developing countries. Cities consume a lot of energy to be maintained. And environmental pollution, air pollution, and noise increase. In particular, air pollution is a serious problem. In fact, the annual average level of fine particle substances in urban areas, so-called PM2.5, is causing severe air pollution every year, especially in China.

Not only in big cities like Tokyo, but also in small cities where many people live, there is always a close relationship with environmental pollution. Yokkaichi, Mie prefecture is a large city with a current population of 310,000. In 1962, in Yokkaichi, there were a number of incidents of asthma-like symptoms that appeared to be caused by air pollution. This

was due to sulfuric acid gas emitted from the petrochemical complex. It is estimated that there were nearly 6,000 patients, including mild cases, who showed symptoms of not only asthma but also pericarditis and conjunctivitis. In response to this pollution disease, the Japanese government has been promoting the "Future City for the Environment" concept, which aims to create cities and regions with sustainable economic and social systems, while addressing issues such as the environment and dealing with the aging population, in anticipation of the future global trend of urbanization.

There are many other urban suburbs that have increased as industry has developed. On the contrary, in China, the rapid industrialization and the rapid increase in the number of cars in the big cities have caused air pollution of PM2.5, which is estimated by the Chinese government to kill 300,000 people

a year.

Consideration for the environment is necessary to create a town where many people can live comfortably. When garbage is incinerated or garbage trucks run, carbon dioxide and greenhouse gases, are produced. The more greenhouse gases in the air, the more heat that stays in the atmosphere, causing global warming. Global warming will have a great impact not only on human activities but also on the ecosystems of animals and plants on earth.

One of the cause is higher incineration rate in Japan than in Europe. The total amount of waste generated in Japan is 42.72 million tons, and the amount of waste generated per person per day is 918 grams. On the other hand, the average for the 28 EU member countries is 481 kg.

Although Japan seems to be relatively proactive in recycling and thoroughly separating waste, the amount of waste generated is quite high. Increasing the number

of recyclable items by separating garbage and reducing the total amount of garbage will not only save energy, but also reduce greenhouse gas emissions at the time of garbage disposal, thus protecting the global environment. In this way, by increasing the number of things that individuals can do, not only cities but also the nation can reduce the negative impact on the environment.

There are many things we can do to prevent this kind of damage. For example, we can notice the difference in our daily life. If they notice anything strange in their daily life, such as the color of the sky being different from usual, or the number of dead fish in the river, sharing the news can be a way to step forward. It might be a small step to prevent major urban pollution.

By: Taichi Morishige, Yuuma Matsumoto, Yuzu Hattori, Hiyori Mukai, Kanato Takagi, Saki Sudou

Coral reef and Microplastics

The spread of microplastics and the influences it has on the marine life have drawn large attention in recent years. Microplastics are small plastic pieces less than five millimeters long. Once released in the natural environment, it is difficult to remove because of their small size.

When marine creatures such



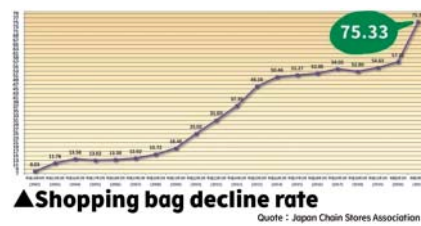
as fish and coral mistakenly eat microplastics, it is tricked into thinking that they don't eat or end up dead from starvation.

Increased consumption of plastic products causes many stresses for the coral. For example, plastics whiten its color. The microplastics might also accelerate the coral bleaching process whose main cause is global warming.

Microplastics are affecting our environment in many more ways. Any life living in and around river and oceans are in danger of consumed microplastics. And the amount of those microplastics have already contained in our

food chain and the amount is increasing.

Is there any way to prevent more damage for the coral? One easy and effective action is using our own shopping bags instead of plastic shopping bags. In Japan, a law passed in 2020 requiring all retailers to charge their customers for their plastic bags. The graph, indicates that the number of people using plastic bags has decreased, as well as the number of plastic bags which are used for shopping. There are many more ways we can act to solve this problem. In order to take effective actions in individual levels, it is important for us to know this



▲Shopping bag decline rate
Quote : Japan Chain Stores Association

microplastic problem.

By: Kadota Chiyori, Okawach Saaya, Uchiyama Koharu, Maruno Takum, Aoe Keita, Ryogo Tanaka, Ryoma Tada

Actions to Eliminate World Poverty

Currently, there are 356 million people in the world who are in extreme poverty. There are other ways to help these people besides financial assistance. First of all, there are activities around the world.

ODA, Official Development Assistance, provides funds and technological assistance for developing countries. As an example of ODA activities, Bangladesh constructed the Kachipur Bridge to improve transportation infrastructure and eliminate regional disparities. In addition, Japanese ODA works on disaster prevention such as disaster forecasting, climate change countermeasures, and safe water supply in Bangladesh.

Fair trades aims to improve the livelihoods and independence of producers and workers in

developing countries, who are in a weak position, by continuously purchasing raw materials and products from developing countries at reasonable prices.

Coffee occupies a large proportion of the Fair Trade certified product market, but cocoa and cotton products, bananas and spices, which are the raw materials for chocolate, are also increasing.

In 2016, 73 countries are dealing with fair trade products. It has reached about 7.88 million euros on the 20th anniversary of its establishment in 1997. Many people are suffering from poverty as the number of fair trade products increases.

There are also initiatives taken by companies. UNIQLO is a clothing store., which collects

極度の貧困状態(1日1.9ドル未満)で暮らすのは、
約6億8,900万人(2017年時点)



<https://sdgs.edutown.jp/info/goals/goals-1.html>

UNIQLO products that are no longer needed at store sends them to refugee camps and disaster-stricken areas. Clothes that cannot be reused are used as fuel and recycled materials as much as possible.

There are also familiar activities that we can cooperate with.

Also UNESCO invites donations of miswritten postcards, unused stamps, book tickets and QUO cards, which are exchanged and used as funding for school children in Cambodia.

Finally, for students, a study tour can be an opportunity to visit a developing country and deepen understanding of the lifestyle of the country.

The duration of the visit is only a few days to a week, so the volunteers can easily schedule to participate.

By: Yamamoto Nako, Oota Tomoki, Ogihara Asami, Suzuki Mei, Tokiwa Akito, Hisatome Kouyou, Yamada Syuto

The Familiar Poison: Microplastics

How do microplastics actually afflict living things? This picture shows a turtle suffering by a piece of plastic. The next picture expresses the sight of a small fish having entered into the plastic bag and being stuck. Like this, we can notice that plastic created by the humans actually made

creatures endangered. 8 million tons of plastics discharged in a year. But, there are some countermeasures to overcome this situation. For example, the spread of products using biodegradable plastics, measures to reduce non-degradable plastics, and products made of plastic instead of paper are made. We believe that

preferential consumption of these products can contribute to the solution of this problem. It will also be effective to participate in volunteer activities to reduce plastics that properly separate plastics. This problem is not something that can only be solved by great men and leaders as it has in the past. It's solvable if each of

us carry out what we can do.

By: Kawada Yuki, Yoshida Chisato, Terai Yuto, Ishihara Atsushi, Okazaki Hidehiko, Takata Ayaka, Arai Nanami

Contributing to school children in Africa

Today, there are countries in the world where the children can't go to school for a variety of reasons, including financial reasons. Especially



<https://pixabay.com/ja/photos/学校-教育-アフリカ-1645201/>

in Africa, serious educational problems are occurring in each country. According to organizations supporting SDGs, it will still take at least 35 years for the world to have a substantial educational system with arrangements with educators and funds. Are there any ways to contribute for those school children?

Donations is one firm and quick way, but we can also donate prepaid cards. Also, fare trades make it possible to pay

the proper price for producers and it may lead to child labor to decrease. The parents may be able to prepare for their children to study at school. There are some things people can change with efforts. People should think about education in poor countries and start some action for it.

By: Nakada Taiyo, Tada Kohei, Tabakawa Kenta, Suzuki Yusei, Kubono Yura, Yokota Sakura, Enjo Miku

Problems with Suzuran-dori

Suzuran Dori is a shopping street near Kyodo Station. It was opened in 1927 and is the 95th year of the shopping area. It has a homely mood and you can feel the old-fashioned scenery. The problem with Suzuran-dori is that it is a

shopping area, so there are many people passing by, cars often pass through it, and the roads are narrow.

So, the solution is that we can't spread sideways and walk too fast when riding a bike. Therefore, it is important to be aware of it as

much as possible without thinking that you were unrelate.

By: Seita Hariu, Sho Ueda, Reina Kato, Riru Matsuzaki, Rihito Tabikawa, Honoka Saito, Haruto Ishizawa



Photo by Seita Hariu

The problems of toilet and sewage water

About 800 people, of which are mostly in Africa, die a day due to diarrhea and dehydration, which are caused by open defecation. The cause is due to the fact that it is difficult to run water pipes on the vast land and it costs a lot of money.

Industrial wastewater is one of the major causes of water pollution. Drained to the sea, it becomes a bait for marine plankton, and a large amount of red tide occurs. In developing countries such as India and Myanmar, where sewage is not well maintained, there occur other malignant physical effects: diarrhea and infectious diseases caused by drinking water and mass infectious disease infection caused by diarrhea. It is often the main problem in developing countries that providing suitable sewage system is not easy. Although the diversion type sewer can separate sewage and rainwater, it does not fit to narrow lands. On the other hand, the widely used, divided-type sewage is difficult to be installed in large



<https://ganref.jp/>

cities that have been developed in advance.

Although providing suitable sewage system cannot be achieved in individual levels, what we can do is to raise funds. Using the funds, we can offer oral rehydration salt, or household kit, or support to purchase water purifying tablets. A tablet can purify four to five liters of water and it costs a thousand yen..

By: Kaito Takahashi, Haruki Nakamura, Michita Tawa, Akito Sasaki, Ribera Aoki, Ruri Matsumoto, Hina Kawauchi

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 Contact: 3-24-22 Sakurajosui, Setagaya-ku, Tokyo, Japan 156-0045
 URL: www.sakura.chs.nihon-u.ac.jp