



未来 Mirai. Our Common Future.

A Dialog on the UN Sustainable Goals (SDG's)

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Abstract

The purpose of this paper is to discuss the UN Sustainable Goals. It is prepared for the UN Global School program and a dialog with students in Japan. All seventeen goals are very comprehensive. I will therefore narrow down to some of the goals and address topics such as education, health, climate change, peace, and the importance of democracy and governance. Since many of you are high school students and teachers, I will try to adapt the content to something that may be relevant and recognizable to you. To reduce language barriers, I will use mostly pictures in the presentation, and this text with some of the pictures. My hope is that you can find some inspiration for your own life and to take some action on sustainable development in your community.

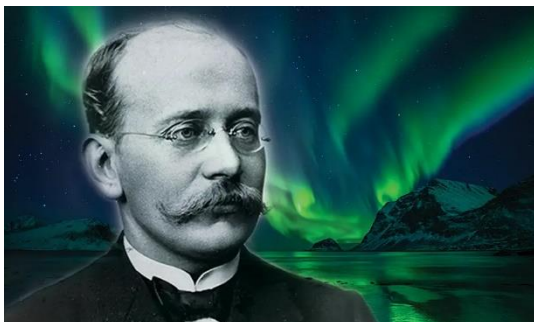
Greetings

Good morning in Japan! My name is Bjorn Magne Aakre. I am calling you on Zoom from Norway. We have 8 hours of time difference so here is still 7 am in the morning.

I am Professor emeritus at University of South-Eastern Norway. It is located South of our capital city Oslo, and I live in a city called Kongsberg where I am now. I have been to Japan a few times, visiting places from Wakanai in the North of Hokkaido to Kikai in the South of Kagoshima. Unfortunately, not yet to Okinawa, but still hope someday.

Aurora Borealis.

In Japan I am often asked about the "Orora", the Aurora Borealis also called the Northern light. As I was born in the North of Norway, the Land of the Midnight Sun and the Aurora Borealis, I chose the "Orora" as my background picture. May be some of you have been to Norway before? What about Europe?



Talking about the "Orora" I like to mention the Kristian Birkeland. He was the first space scientist and did ground-breaking research on the Aurora Borealis (APS, 2021). He visited many countries, including Japan. On his last journey, however, he fell ill and died in Tokyo in 1917. Professor Nagaoka of Tokyo University spoke at his funeral.

Today Birkeland's name is often linked to green energy like Hydrogen (H₂) and Ammonia (NH₃). We will discuss more about that later (SDG 13).

**The Plastic Problem (SDG 14).**

Humans have long polluted the oceans in the belief that the oceans are large and can absorb our garbage with no harm. Now we understand that it destroys life in the sea and the fish we eat. The picture shows high school students collecting plastic waste (NRK, 2018).

A special problem is micro plastics so small we cannot see them with our eyes, but eaten by fish and other marine life. Many countries therefore have measures to clean beaches of plastic and other rubbish.

However, a better strategy for sustainable development to stop polluting the oceans. How about the shores of Japan?

I have observed that people in Japan, both young and old, rarely leave waste anywhere. How did you learn such good habits? May you can teach others about how we can take better care of our surroundings?

Mahatma Gandhi claimed that “The future depends on what you do today”. His words can serve as guidance in our time. In Norway we have a saying that “no one can manage everything alone, but everyone can do a little and make a difference”. Two ways to get involved in the plastic- and other environmental problems is to contribute to our own local environment or to get involved in organizations such as World Wildlife Fund (WWF). Do you know any such organizations in your community?

Silent spring and a poem (SDG 15, figure 3).

Knowledge of harmful pollution is not entirely new. But it has taken a long time and much remains to be done. The first book I read about it was called "Silent Spring" by Rachel Carson (1962). The title says a lot and it's still worth reading. She describes how the use of chemical products damages and kills life in nature. Now we know better and can make a difference if we want to. Science is often a double-edged sword: both beneficial and harmful. When we learn to use science, we also have to learn about harmful effects and ethical dilemmas. Unfortunately, it doesn't always happen.

As a contrast to "Silent spring" I wrote a Haiku poem. What you think about it?

ささやきの桜、
優しい風に乗って花々が舞い、
春の儂い美しさ

Whispering cherry,
Blossoms dance on gentle breeze,
Spring's fleeting beauty.

Well, to be honest: I got help by AI, artificial intelligence (Chat Gpt). AI is going to have a big influence on our lives. If I were young today, I would certainly spend some time learning and understanding



more about it. There may also be future careers and AI may be useful in our efforts to reach the global sustainability goals. But many also fear negative consequences. What do you think about it?

Our Common Future and the SDG's.

The term sustainable development originally comes from a UN report from 1987. It is also referred to as the Brundtland report after the head of the commission Gro Harlem Brundtland. For many years she was Prime Minister of Norway, Minister of the Environment and later head of the UN World Health Organization.



In the years since, the concept has been concretized in seventeen overall goals. Now the world's nations are trying to agree on concrete measures to reach these goals.

Sustainability is explained as follows: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. They place equal emphasis on both social, economic, and environmental conditions (UN, 1987).

Personally, I think of my grandchildren when I read or speak about this (UN, 1987). How you think about your future and the challenges we face today?

The UN Global School Program.

To promote knowledge about and the ability to take responsibility and action, the UN has established the global school program.

From what I understand, you are involved in this program and part of the reason why I was asked to contribute with this presentation. I know that some of you will visit partners Hawaii and some other school collaborate with classes in South Korea. What other projects do you do or plan to do?

SDG's and Circular Economy.

The sustainability goals have been translated into many languages to engage as many people as possible. The picture is from Tromsø in Northern Norway and on the picture the goals are written in Sami. The language used by indigenous people in Norway and the student in the picture is Sami. Maybe the goals are also written in the Ainu language in Japan?



The picture also shows another important concept: Circular economy as a prerequisite for sustainable development. Circular economy means ecological balance between what we take from nature and what we give back. This is now a goal for modern business.

Education (SDG 04).

Education is a fundamental human right enshrined in the Universal Declaration of Human Rights. The Convention also acts as a cornerstone of the Education 2030 Agenda and Sustainable Development Goal 4.

In the picture, we see our Crown Prince Haakon Magnus visiting a school class to discuss the topic. On the board we see themes such as sustainable development, war and conflicts, climate change, equality, poverty, pollution etc.

How do you deal with such problems in the Japanese schools? Are there projects where you go out of school to act on such problems? What can we do about it?



Both Japan and Norway give all children a good education. Almost everyone completes high school many go on to universities or colleges. In Norway, higher education is free and there are no entrance exams like in Japan. This means that the years in high school are perhaps somewhat less stressful in Norway than in Japan. What do you think about it? What is a good balance between school and leisure activities?

The final months in high schools, the students in Norway are called “Russ” from a Latin word meaning enlightened. They dress in special red or blue dresses, a tradition adopted from Germans in 1905.



In the picture on the left we also see Princess Ingrid Alexandra who took her exam in June 2023. The picture on the right is from Kongsberg where I live, and the school I used to worked at many years ago.

The graduating students wear special clothes that are red or blue, they celebrate with parties and pageants. Most also join a group with their own buss, songs, and videos. In recent years, this tradition has escalated, and many fail the exam. It worries both parents and teachers. How about Japan?

I know that Japanese students have to study very hard for their entrance examinations. We do not have such exams in Norway.

All “Russ” in Norway have a personal business card for the occasion which they willingly hand out to everybody. For young children, it is popular to collect as many cards as possible.

The card is characterized by humor and tells a lot about the person. The example is our Prime Minister Jonas Gahr Støre. He was “Russ” and president of the “Russ” in 1979. He represents the Labour party, but actually he comes from a wealthy family and jokes about it: “It is better to be rich and healthy than poor and sick”.

How about Prime minister Fumio Kishida?



Sustainable Development Education.

Environmental education was introduced in Norway in the early 1970's and the concept sustainable development was adopted in the 1990's. Unfortunately, some research indicates there was less focus on it in recent years in favor of more drill and focus basics skills in reading, writing, math and science as classical fact-based subjects.

Now we hope that the new curriculum of 2020 will strengthen more multi-disciplinary teaching about sustainability (Udir, 2020).

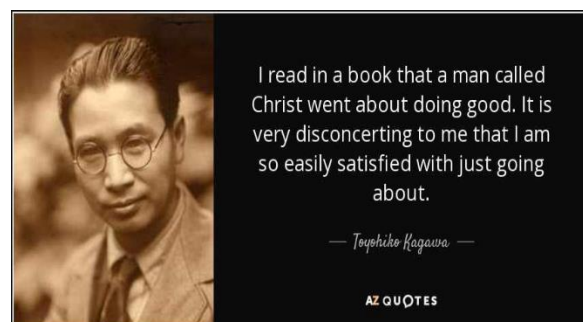
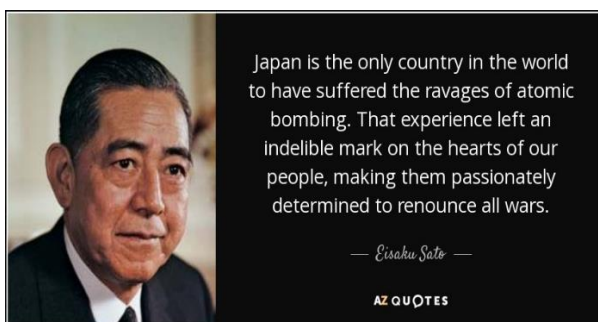
I think environmental education is included in the Japanese Act on Education. Ho is this reflected in the schools?

Peace (SDG 16, figure 12 - 14)

War and conflicts are the biggest obstacle to achieving the UN sustainability goals. I understand that you already did some school activity on this problem and visited Nagasaki where I took this picture. It is from the Peace Park.

People in Japan themselves have experienced the horrors of modern war and have since made a great effort in peace efforts. Unfortunately, there are still threats from neighbors. Last year when I visited Japan there was suddenly a warning on TV about missiles approaching over the Japan Sea. Your partnership with Hawaii and visit to Hawaii is a good way to learn about other people and to improve relations that was difficult before. From a school in Nagoya, I learned about a similar partnership with students in South Korea.

Norway is probably best known for the Nobel Peace Prize. Sato Eisaku received the price for his effort to stop spread of atomic weapons.



Kagawa Toyohiko was nominated twice. He was also nominated for the Nobel Prize in literature. He represents a broader view on peace. He pointed out that war and conflict have their cause in poverty and inequality, which must be fought to achieve peace. His perspective stands strong in today's view of what peace is and how we can work for peace. The next figures will illustrate it.

Peace is not just the absence of war, but a basic sense of well-being. This model is from my article on Peace education introducing a wider perspective on peace. Well-being is also about good health, our next topic.



Good health (SDG 03).

In the preceding section, well-being was highlighted as a fundamental prerequisite for peace. In the deepest sense, it is about health in the broadest sense. Good health, mentally and physically, is also a fundamental prerequisite if we want to care of ourselves and take responsibility for our common earth (Grossmeier, 2021).



Good health is related to our well-being, identity, and a positive self-image. It is an important task for the schools to help students develop a positive self-image. Unfortunately, we have reports that many children are not doing well, also in Norway and Japan. We will focus more on that.

The figure gives us some concepts to understand what affects our identity, our sense of self and our ability to live active lives. Sustainable development

has both social, economic, and environmental dimensions.

We have reports that say many children feel left out. Many people experience bullying, especially on social media. Even in prosperous countries such as Norway and Japan, we are experiencing increasing poverty among children and their families (OECD, 2021).

More students than before are experiencing mental stress and anxiety, and the use of anxiety-dependent medications has increased in recent years. More girls than boys experience these problems, while boys often struggle with acting out behavior and are diagnosed with ADHD. Why you think this happens? What about Japan? What can be done to it?

But there are also positive signs, including when it comes to equality and opportunities for girls in education and work. In 2023, over 60% of students in higher education in Norway were girls. Now we can rather talk about this as a boy problem. On the other hand, it is still the case that men earn more than women and there are still more men than women in leading positions. We now have laws on equality, but still a long way to go.

Finally, some struggle with their sexual orientation or to be accepted at school or among friends. Today there is greater acceptance, but many still experience harassments, and we have experienced violent assassinations on young politicians at Utøya, and other legal groups. In many Norwegian cities we now have Pride parades to express diversity and solidarity with people who are different. How about Japan?

Governance (SDG 17).

To achieve the sustainability goals, we must have stable governance systems that can make difficult decisions and implement the necessary measures. It must be learned and practiced in school.

Most countries are struggling to make decisions about how the sustainability goals can be achieved in the individual country and globally. One of the most difficult issues is to slow down climate change by reducing CO2 emissions. Norway produces a lot of oil and gas that many countries need. But at the



same time, it contributes to the emission of CO₂. Some think we need better governance and decisions on a change to more green energy. How do we deal with it in the schools?



Student participation is an important principle in Norwegian schools. This means that the pupils must have a say, participate in and have an influence on what concerns them.

Through student participation, students receive training in and experience with democratic processes. They learn about political decisions. At the elections every two years, political debates and school elections are held).

At the last election in September 2023, topics such as climate and sustainability were next absent compared to previous years. It's a bit disturbing. A prominent politician declared that the "Greta Tunberg" generation is dead. Tunberg is a well-known climate activist from Sweden. Have you heard about her?

What happened? Perhaps many young people are less interested in big words and actions. Perhaps they just want a different rhetoric and a focus on realistic and concrete solutions. What about Japan?

Another problem is low participation in elections. One measure in recent years has been to engage pupils in informing others about the election, where and how they can vote. What about Japan?

Climate change and Green Energy (SDG 14, figure 25 – 27)

In Norway, we still have many climate skeptics who speak out, especially on social media. But from a scientific point of view, it is very likely that the climate on earth is out of balance.



This scene with a polar bear and two cubs is nice and beautiful, isn't it? But it doesn't take away the seriousness of the ice around them melting. In the Arctic, we see the fastest climate changes and with consequences we can hardly foresee (WWF, 2023).

Norwegian researchers are perhaps best known for their explorations of Arctic and Antarctic. Perhaps you have heard or read about Nansen and Amundsen and the polar expeditions they carried out. The picture shows the Northeast Passage when Nansen allowed his ship "Fram"

to freeze into the ice in his attempt to reach the North Pole in 1892. Now in 2023 it is open sea for a large part of the year all the way from Norway to Japan.

Green energy with dilemmas (SDG 14).

If we are to reach the climate targets of zero emissions in 2050, we must phase out fossil fuels and use clean and green energy. We get that from hydropower, wind turbines and solar panels. But in many areas, including shipping, we also need other energy carriers such as hydrogen (H₂) and



ammonia (NH₃). The picture to the left is a Toyota Mirai running on Hydrogen (H₂). The picture to the right is the Norwegian ship Yara Birkeland, World's First Autonomous & Zero-Emission Ship (MI, 2020).

Norway and Japan are major shipping nations, so they are working together to develop the use of hydrogen and ammonia.



Note that ship Yara Birkeland is linked to names Kristian Birkeland who we mentioned at the beginning as the researcher of Aurora Borealis. He also contributed to developing technology for the production of hydrogen and ammonia for fertilizer, which is still an important export product for Norway.



On the other hand, the production of green energy also has its disadvantages and damages nature. Some of the first environmental actions in Norway were protests against the development of hydropower in the 1970s.

Today, large wind turbines are being built that seize large areas where, among other things, reindeer graze, which affects the rights of indigenous people.

In Norway, the Supreme Court has ruled that some such facilities are illegal and in breach of indigenous people's rights. The case receives a lot of attention in the form of demonstrations and actions. Some believe that the windmills must be demolished (TU, 2023).

An alternative is to build wind turbines far out at sea. Like Japan, Norway has large sea areas and such facilities are now being built to replace oil and gas.

Have you experience similar dilemmas and conflicts in Japan. How can such dilemmas be resolved in a good way?

Partnership and stable government (SDG 17)

To reach the global sustainability goals, we need to work together locally and globally, and we need to support stable and governable democracies. My impression is that both Japan and Norway have such, but it requires cooperation and effort from all of us.



A democracy requires active participation through elections and political decisions. It is therefore important that we learn democracy and participate in elections as early as possible. In Norway, democracy and citizenship are one of three overarching goals for the school. This happens through participation, debates, and trial elections in schools. We also have political youth organizations. What about Japan?

In many countries, participation in elections is low, especially among young people. What about Japan?

The form of government in Norway and Japan is quite similar and based on democracy with free elections. The Constitution of Norway defines a king or queen to be the symbol of the State and of the unity of the people. The Constitution of Japan defines a male Emperor to be the symbol of the State and of the unity of the people. Both the King in Norway and the Emperor in Japan perform ceremonial duties and hold no real power.

Political power is held mainly by the prime minister, cabinet, and other elected members of the Parliament. In Norway the parliament has one chamber, in Japan two chambers, but the political process is not very different.



The picture to the left is from the opening of the Norwegian Parliament, the Storting. The picture shows King Harald and Crown Prince Haakon receiving the throne speech from the Prime minister. The picture in the middle is Princess Ingrid Alexandra who may one day become our Queen. The picture to the left is from a Norwegian secondary school taking part in a trial election (VG, 2021).

How about the future in Japan?

Unfortunately, Democracy has been under attack in many countries in recent years. Therefore, it is important to be alert and get involved. Surveys also show that fewer young people than older people vote in elections. It is therefore important to inform and motivate young people to participate in democracy and to vote in elections.

There is a saying: "Those who sleep in a democracy may wake up in a dictatorship". Therefore: "Act locally and think globally" may be a good strategy for our common future. Happy Future!



Questions for discussion

Q1 (p1). May some of you have been visiting Norway? What about Europe? Did you visit some other country? What did you experience there that you liked or surprised you?

Q2 (p1). It is observed that people in Japan, both young and old, rarely leave waste anywhere. How did you learn such good habits? What about the shores or on small islands, did you observe any waste there? Are there any program to clean the ocean for plastic or other harmful rubbish?

Q3 (p2). What you think of the Hiku poem on page 2? Did you experience any program on Artificial Intelligence (AI)? How do you think they may change your life?

Q4 (p3). What is the definition of sustainable development? What you believe are the major challenges to solve in the future when it comes to sustainable development? What you think can be done about one of them?

Q4 (p4). Are the sustainable goals available in the Ainu language? How you think global warming may have harmful effect on minorities and indigenous peoples?

Q5 (p5). What profession you prefer to have in the future? How can you dela with sustainable development in this profession? What is a good balance between school or work and leisure activities?

Q6 (p6). More students than before are experiencing mental stress and anxiety, and the use of anxiety-dependent medications has increased in recent years. Why you think this happens? What about Japan? What can be done to it?

Q7 (p7). Global warming is one of the most debated topics in public discourse worldwide. Some people doubt that. What do you think? What can be done about it?

Q8 (p8). What is "green energy"? Discussed some of the dilemmas that the transition to green energy entails?

Q9 (p9). How can young people's participation in democracy and elections be improved?

Q10 (p10). What dreams you have about your future?



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