

TRAINING REPORT FOR “CLEAN OCEAN PROJECT BY STUDENT IN SABAH AND AKITA (COPSA) TRAINING IN JAPAN

11TH TO 18TH MARCH 2024

AKITA, JAPAN

Participants

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DATE	TRAINING CONTENT/ VISITS	OBSERVATION / LESSONS LEARNT	ATTACHMENT (PHOTO)
1. 11/03/24 (Monday)	: Visit at Akita International University (AIU) Purpose of visit: Introduction to the AIU	<ul style="list-style-type: none"> • One of the best libraries in Japan with a colosseum inspiration design • Most of the buildings are made of Akita's Cedarwoods. • The university has a partnership with more than 200 universities all over the world including University of Malaya and University of Science Malaysia • AIU offers foreign exchange student programme. 	Photo 1-3
2. 12/03/24 (Tuesday)	: Visit at Akita Art Center “Mill Has” Purpose of visit: Introduction of the Akita Art Theatre and the facilities	<ul style="list-style-type: none"> • A modern cultural venue in Akita City, Japan officially launched in September 2023. Akita Prefecture and Akita City collaborated in the construction of the theatre. (4 years to complete the building) • The theatre features a main auditorium with seating capacity up to 2007 with its innovative acoustics and stage systems, the hall's versatile design sets for a wide range of performances. The distinctive shape of the walls with wooden material and the acoustic reflectors creates a great resonance environment. 	Photo 4-6

		<ul style="list-style-type: none"> • The second biggest hall with seating capacity up to 800 optimises the possibility of drama, dance, music and many performing arts. The walls are designed with Akita's traditional Kumiko craftwork. • It includes 2 smaller performances halls with audience capacity up to 140 for hall A and 100 for hall B. What's unique about hall A is the training space that is exactly the same as the main stage in the main hall. • The venue is equipped with advanced sound and lighting systems to enhance the quality of the performance. • In general, the theatre offers a lively stage for artists and performers to showcase their talents while enhancing the local cultural environment. 	
3.12/03/24 (Tuesday)	<p>Visit at Akita Eco Plash (Noshiro City)</p> <p>Purpose of visit: Introduction to Akita Eco Plash, their plastic recycling practices and initiatives</p>	<ul style="list-style-type: none"> • Established in 2004, with a capital of ~RM10 Million (JPY295,000,000), AEP main business is recycling of containers and packaging materials from domestic waste, recycling of plastic waste from business operators and manufacture of injection moulded products using recycled materials • the uniqueness of this company is not only doing recycling but producing the recycle plastic into another product which is a pallet. <p><small>AEPは2004年に設立され、資本金は1,000万RM（2億9,500万円）で、主な事業は、家庭から出る容器包装材のリサイクル、事業者から出る廃プラスチックのリサイクル、リサイクル材を使った射出成形品の製造である。この会社の特筆すべき点は、リサイクルを行うだけでなく、リサイクルされたプラスチックをパレットという別の製品に製造していることである。</small></p> <ul style="list-style-type: none"> • The recycling capacity of this company is 10,000 tonnes/year. • Other than domestic waste, they purchase sorted packaging waste (PP&LDPE) from major distribution companies and food packaging material (PP) from major bakery companies, recycled in and use it for moulding material. • Products made of moulded recycled material are Aqua container AE1 a block parts for rainwater harvesting tank, plastic pallets and Gutter. • Challenges faced by the company: <ul style="list-style-type: none"> ◦ some plastic type in the recyclable resin such as PS is low strength and low demand as recycled material. ◦ sorting of resin type is difficult. ◦ low purity of the raw material stage limits the production of recycled materials. ◦ Disposal cost and risk of product price (high risk, low return) ◦ increase of disposal cost & rules for the disposal of residues from container recycling ◦ effectiveness depending on type of packaging waste, segregation rate and clean waste. 	Photo 7-8

		<ul style="list-style-type: none"> Environmental initiatives by AEP: <ul style="list-style-type: none"> increase usage of renewable energy. organised beach clean-up programme and recycle the waste collected from the programme into plant pots given back to children; and donation of 20 Yen per kg of recycled marine plastic waste to UNEP Japan. <p>この会社のリサイクル能力は10,000トン／年である。</p> <p>家庭系廃棄物以外では、大手流通会社から分別された包装廃棄物（PP&LDPE）、大手ペーカリー会社から食品包装資材（PP）を購入し、リサイクルして成形材料に使用している。アクアコンテナAE1、雨水貯留タンク用ブロック部品、プラスチックパレット、雨樋など。</p> <p>▶会社が直面している課題：リサイクル可能な樹脂の中には、PSのように強度が低く、再生材料としての需要が低い樹脂もある。樹脂の分別が難しい。原料段階の純度が低いため、リサイクル原料の生産が制限される。廃棄コストと製品価格のリスク（ハイリスク・ローリターン）。廃棄コストの増大と容器リサイクル残渣の廃棄ルール。包装廃棄物の種類、分別率、グリーンな廃棄物による効果。</p> <p>▶AEPによる環境への取り組み：再生可能エネルギーの使用を増やす。海岸清掃プログラムを実施し、回収したゴミを植木鉢にリサイクルして子どもたちに還元。リサイクルされた海洋プラスチック廃棄物1kgにつき20円をUNEPジャパンに寄付。UNEPジャパンに寄付する。</p>	
4.13/03/24 (Wednesday)	: Visit at Daisen Biomass Power Generation Co., Ltd. at Daisen City Purpose of visit: Introduction to the Wood Biomass Power Generation	<ul style="list-style-type: none"> This company generates electricity by burning wood chips from unused wood or rejected timbersuch as wood chips from logs, timber scraps, treebark, wood pellets etc. They calculated a reduction of 23,000 tonnes of CO2 per year with the alternative of Biomass power usage. The company is showing their corporate social responsibility through sponsoring a bus stop shedwith underfloor heating from Daisen Biomass power generation plant for the local community usage as well as helping to sprinkle hot water to melt snow in the public car park during winter. This company demonstrates how energygenerated by the combustion of biomass canbe used to minimise the usage of fossil fuels and to benefit local communities through Corporate Social Responsibility programmes. 	Photo 9-10
5.13/03/24 (Wednesday)	: Visit at Akita City General Environment Center Purpose of visit: Tour of the recycling plaza and melting furnace	<ul style="list-style-type: none"> Segregated domestic waste in Akita is being managed by Akita City General Environment Center Plastic wastes were recycled according to their categories and reproduce as other valuable material such as clothes, chairs, tables, souvenirsand many more. <p>秋田市の家庭ごみは、秋田市総合環境センターが分別管理している。分別されたプラスチックごみは、衣類、椅子、テーブル、お土産品など、有価物として再生利用されています。</p> <ul style="list-style-type: none"> Plastic categories that can't be recycled into otherproducts will be heated & used as energy. The centre has converted their previous landfill areas to put in their Mega power solar panels. <p>他の製品にリサイクルできないプラスチック類は、加熱してエネルギーとして利用する。センターは、以前の埋立地を改造し、メガパワー・ソーラー・パネルを設置した。</p>	Photo 11-13

		<ul style="list-style-type: none"> • They are using solar power and energy from recycled plastic waste to reduce the consumption of fossil fuel. 化石燃料の消費を抑えるため、太陽光発電やプラスチック廃棄物のリサイクルによるエネルギーを利用している。 • This company's capacity to maximise the utilisation of recycled materials to develop items with economic value while also minimising dependency on the usage of fossil fuels is truly fantastic. リサイクル素材を最大限に活用し、化石燃料への依存を最小限に抑えながら、経済的価値のある商品を開発するこの企業の能力は、本当に素晴らしい。本当に素晴らしい。 	
6.14/03/24 (Thursday)	: Visit at Akita Chuo High School Purpose of visit: Introduction to the school and presentation on their survey findings in Sabah, Malaysia	<ul style="list-style-type: none"> • Akita Chuo High School is one of the best government schools in Akita City with around 600 students. • The environmental awareness activities are conducted by project-based learning across all subjects. • 4 Students presented their survey findings on marine plastic waste in KK Wetland, Kg. Darau and Kg. Kobuni, Sabah during their visit from 27th October – 2 November 2023. 学生達は、KK ウェットランド、Kg. Darau、Kg. Kobuni、2023年10月27日～11月2日にサバ州を訪問。 • It was found out that plastic bottles and food trays are the highest category of waste dumped into the rivers and the ocean while metal waste suspected to be illegally dumped was found in the upstream areas. 河川や海に投棄されるゴミの種類は、ペットボトルや食品トレーが最も多く、不法投棄が疑われる金属ゴミは上流域で発見された。 • They also acknowledge the active participation from the 3 school's students that they have visited and were impressed with the existing environmental education programme they have implemented. They are looking forward to work with them. また、訪問した3校の生徒の積極的な活動を共有し、彼らが実施した既存の環境教育プログラムに感銘を受けた。学生たちは一緒に活動することを楽しみにしている。 • From their visit at Kayu Madang landfill and interview with DBKK, they think that there is an urgency to tackle the amount of waste being dumped to the landfill to avoid environmental issues such as underground water pollution from the leachate and smell issue. カユ・マダン最終処分場の視察やDBKKへのインタビューから、浸出水による地下水汚染や悪臭問題などの環境問題を回避するために、埋立地に投棄される廃棄物削減に取り組むことが急務であると考えている。 	Photo 14-16
7.14/03/24 (Thursday)	: Visit at Port Tower "Serion" Purpose of visit: Introduction to renewable energy in Akita (Akita Katagami Wind Farm & Akita Mega Solar Power Plant)	<ul style="list-style-type: none"> • The Akita Offshore Wind Farm, visible from Akita Port side, is the first commercial wind farm operating in Japan since 31 January 2023. • The wind farm can supply electricity to about 130,000 households, almost covered the whole households in Akita City. • Overall, the Akita Wind Farm serves as a tangible example of Japan's commitment to transitioning towards a more sustainable and environmentally friendly energy generating system. • Another renewable energy source in Akita is the Mega Solar Power Plant a large-scale solar energy facility with an area of 10 Hectares and has 6 MW mega solar plant and 1.5 MW wind turbines. It harnesses solar energy using photovoltaic (PV) panels to generate electricity. 	Photo 17-19

			<ul style="list-style-type: none"> ● The significance of these renewable energy sources are its capacity to generate cleanelectricity without relying on fossil fuels, thereby reducing carbon emissions 	
8. 14/03/24 (Thursday)	:	<p>Visit at Akita City Department</p> <p>Purpose of visit: Introduction of Efforts by environmental conservation groups by Akita Paddlers</p>	<ul style="list-style-type: none"> ● Akita paddlers is a non-profit organisation that consists of a group of canoeists who enjoy canoeing in a natural environment but eventually started cleaning up the Omonogawa river after they witness how dirty was the marine waste. ● They have done 126 times cleaning activity in the last 20 years with up to 9166 participants. <small>秋田パドラーズは、自然環境の中でカヌーを楽しんでいたカヌーイストたちが、海ゴミの汚さを目の当たりにして、雄物川の清掃活動を始めたNPO法人。過去20年間で126回の清掃活動を行い、延べ9166人が参加。</small> ● Their efforts in clean-up activities have attracted not only canoeists but the public. <small>彼らの清掃活動は、カヌーイストだけでなく、一般の人々をも魅了している。</small> ● CEEA have conducted research on waste tracing with the involvement of Akita Paddlers. <small>CEEAAは秋田パドラーズの協力を得て、廃棄物トレーシングの研究を行った。</small> ● This organisation is an example of how touse common recreational activities and sports to attract public interest in environmental protection and conservation activities. <small>この組織は、一般的なレクリエーション活動やスポーツを利用して、環境保護・保全活動に一般の人々の関心を集める方法の一例である。この組織は、一般的なレクリエーション活動やスポーツを利用して、環境保護や保全活動への一般の人々の関心を集める方法を示した例である。</small> 	Photo 20
9. 14/03/24 (Thursday)	:	<p>Visit at Akita City Department</p> <p>Purpose of visit: Courtesy visit with Director of Environment representing Akita City Mayor</p>	<ul style="list-style-type: none"> ● Welcoming speech from Director of Environment, Akita City, sharing of experience by participants and exchange of souvenirs. ● The Director of Environment has given his support and advice on how to tackle waste management issues such as by strengthening regulation as well as focus on areas that are easy to handle first and develop from there. His hope is for Sabah to lead in tackling climate change issue in the country. <small>環境部長は、廃棄物管理問題への取り組み方について、規制を強化すること、まず扱いやすい分野に焦点を当て、そこから発展させることなどの支援と助言を行った。環境部長は、サバ州が国内の気候変動問題に率先して取り組むことを望んでいる。</small> 	Photo 21-22
10. 15/03/24 (Friday)	:	<p>Visit at Oga Aquarium (Olga City) /</p> <p>Purpose of visit:</p>	<ul style="list-style-type: none"> ● Oga Aquarium GAO located along Oga Peninsular Coast, Oga, Akita City has been operating since 1967 started by Akita Prefecture. It is located within Oogata Geopark that riched with maroon coloured hardened lava that flowed from the volcano about 30 million years ago. 	Photo 23-24

	<p>Marine Conservation Retrieval Team Inspection</p>	<ul style="list-style-type: none"> • This aquarium not only showcases the diversity of Oga's and Akita's marine life and its habitat but also gives visitors the opportunity to understand the importance of nature protection and environmental conservation through several activities such as touch pool, marine waste exhibits to show realistic picture of current issues as well as giving lectures to children on marine plastic problem to increase their environmental awareness. <p>この水族館では、男鹿・秋田の海洋生物の多様性とその生息環境を紹介するだけでなく、タッチプールや海洋ゴミの展示などを通じて、自然保護や環境保全の重要性を理解する機会を提供する。</p> <ul style="list-style-type: none"> • About 400 species and 10,000 items of domestic and foreign creatures are on display, including Gouta and Yuki, polar bears, and the prefectural fish of Akita Prefecture, the grouper. • The local residents are also involved in programmes organised by the management and interact with visitors for example by helping to organise, preparing food and selling souvenirs. • They were successful in enhancing the centre's function to include providing as a resource for information on marine pollution and the value of preserving marine ecosystems as well as showcasing the variety of Oga's marine biodiversity. <p>海洋汚染や海洋生態系保全の価値に関する情報源として、また郭市の多様な海洋生物多様性を紹介するなど、センターの機能を高めることに成功した。</p>	
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Overall, the team has gained insight from the training tour into Akita's outstanding achievements in environmental management, particularly in solid waste management, as well as the city's rich cultural heritage. Environment Protection Department, Sabah may incorporate many examples into its planning, environmental awareness materials and activities by customising them to the state's waste pollution issues. The most inspirational lesson was learned from Akita's advanced recycling initiatives, which include burning biomass to produce electricity and turning plastic waste into valuable products. Government initiatives to promote the use of renewable energy, including mega solar power plants and windmill power plants, are role models for other countries to learn from.

サバ州からの参加者は本研修を通じて、秋田の環境管理、特に固形廃棄物管理の顕著な成果と、豊かな文化遺産について洞察を深めた。サバ州環境保護局は、これらの環境対策事例を、州の廃棄物問題に合わせて調整して、同局による計画や環境意識向上の参考としたり、活動に取り入れることができる。最も啓発されたのは、バイオマスを燃焼して電気を生成したり、プラスチック廃棄物を価値ある製品に変えるなど、秋田の先進的なリサイクルの取り組みであり、教訓が得られた。再生可能エネルギーの利用促進に向けた政府のイニシアティブ、特に大規模ソーラーパネルや風力発電所は、他国の模範となるべきである。

Attachment



Photo 1 Akita International University



Photo 2 Akita International University



Photo 3 Akita International University



Photo 4 Akita Arts theatre



Photo 5 Akita Arts Theatre



Photo 6 Akita Arts Theatre



Photo 7 Akita Eco plash



Photo 8 Akita Eco Plash



Photo 9 Daisen Biomass Power generation Co.,Ltd. (mill visit)



Photo 10 Daisen Biomass Power generation Co.,Ltd.



Photo 11 Akita City General Environment (Introduction of the facility)



Photo 12 Akita City General Environment (explanation on the recycled products)

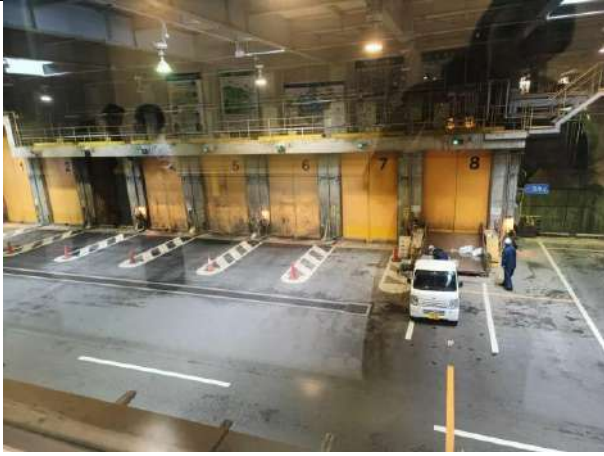


Photo 13 Akita City General Environment (dumping centre)



Photo 14 Akita Chuo High School (Presentation about the school from students)



Photo 15 Akita Chuo High School (Tea ceremony demonstration)



Photo 16 Akita Chuo High School (Presentation on their project in Sabah)



Photo 17 Port Tower "Serion"



Photo 18 Port Tower "Serion" (View of the Offshore Wind Farm)



Photo 19 close-up view of the Wind Farm



Photo 20 Akita Paddlers NGOs



Photo 21 Courtesy visit with Director of Environment



Photo 22 Courtesy visit with Director of Environment



Photo 23 Visit at Oga Aquarium



Photo 24 Marine waste exhibits at Oga Aquarium