



Kansai Airports acquires J Blue Credit Certification Seaweed bed at KIX island certified as effective CO2 sink

Kansai Airports is pleased to announce that we have quantified the amount of CO₂ absorbed by seaweed growing on the seawall around the Kansai International Airport (KIX) islands and obtained J Blue Credit* certification.

Carbon stored in the ocean by the actions of marine life is called "blue carbon," and is attracting attention as a new sink for CO₂. KIX island has adopted a gently sloping masonry revetment for most of its seawalls, creating a rich seaweed bed environment through years of nurturing, maintenance, and monitoring surveys. This J Blue Credit certification publicly recognizes the amount of CO₂ absorbed by these seaweed beds.

The Kansai Airports Group is engaged in various activities to reduce its environmental impact based on its long-term goal of achieving net zero greenhouse gas emissions by 2050.

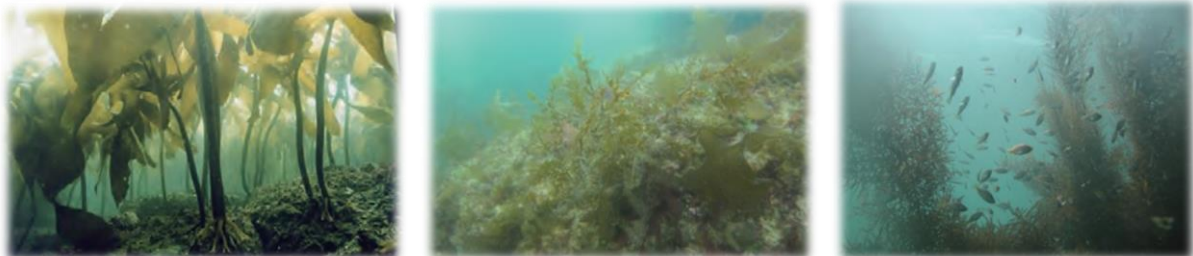
The recognition of CO₂ absorption and fixation has demonstrated that the creation of the seaweed bed environment contributes not only to water purification and the supply of fishery resources as spawning and breeding grounds for fish and shellfish, but also to the reduction of CO₂ emissions.

Kansai Airports Group will continue to promote various initiatives to reduce environmental impact, and thus contribute to the realization of a sustainable society.

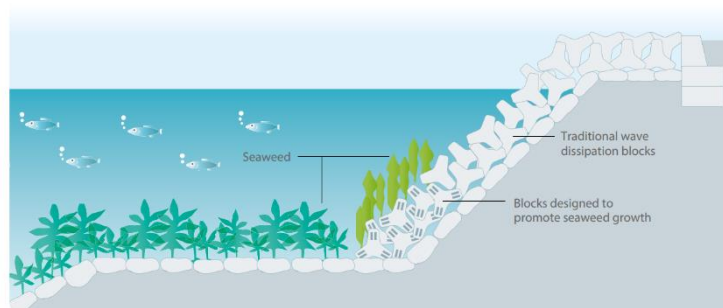
* A credit certified, issued and managed by Japan Blue Economy Association (JBE). The certification and issuance are made after examination and verification by a third-party committee independent of JBE.

Outline

- Project name: Kansai International Airport: Creating rich macroalgal bed environments
- Certified CO₂ absorption amount: 103.2 t-CO₂ (Five years from FY2017 to FY2021)



Seaweed beds around the airport



Gently sloping masonry revetment

Contact Information

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Kansai Airports was established by a consortium made up of VINCI Airports and ORIX Corporation as its core members. Kansai Airports took over the operations of Kansai International Airport (“KIX”) and Osaka International Airport (“ITAMI”) from New Kansai International Airport Company (“NKIAC”) and has been operating the two airports since April 1, 2016.

Kansai Airports Kobe, Kansai Airports’ wholly-owned subsidiary, took over the operations of Kobe Airport (“KOBE”) from Kobe City and started its business as an operating company on April 1, 2018.

Under the concept of “One Kansai Airports Group”, Kansai Airports group strives to continuously improve its services for all airport guests through appropriate investments and efficient operations, with safety and security being the top priority. Kansai Airports group aims to maximize the potential of the three airports, for the benefit of the communities they serve.

For more information, please visit : <http://www.kansai-airports.co.jp/en/>

Kansai Airports

Location	1-banchi, Senshu-kuko kita, Izumisano-shi, Osaka	Shareholders	ORIX 40%, VINCI Airports 40%, Other investors 20% ¹
Company Representatives	Representative Director and CEO:Yoshiyuki Yamaya Representative Director and Co-CEO: Benoit Rulleau		
Business Scope	Operation and management services, etc. of Kansai International Airport and Osaka International Airport		

Kansai Airports Kobe

Location	1-ban, Kobe-kuko, Chuo-ku, Kobe-shi, Hyogo	Shareholder	Kansai Airports 100%
Company Representatives	Representative Director and CEO: Yoshiyuki Yamaya Representative Director and Co-CEO: Benoit Rulleau		
Business Scope	Operation and management services, etc. of Kobe Airport		



About ORIX:

ORIX Corporation is a financial services group which provides innovative products and services to its customers by constantly pursuing new businesses.

Established in 1964, from its start in the leasing business, ORIX has advanced into neighboring fields and is presently undertaking a wide range of businesses such as corporate finance, industrial/ICT equipment, environment and energy, automobile-related, real estate-related, private equity investment and concession, banking and life insurance businesses. Since entering Hong Kong in 1971, ORIX has been operating its businesses globally by establishing locations in about 30 countries and regions across the world.

Going forward, ORIX intends to utilize its strengths and expertise of always generating new value to contribute to society by engaging in corporate activities that instill vitality in its companies and workforce based on ORIX’s unique business model that continues to evolve perpetually.

For more details, please visit our website: <https://www.orix.co.jp/grp/en/>

(As of September 30, 2021)



The world’s leading private airport operator, VINCI Airports operates 53 airports in 12 countries in Europe, Asia and the Americas. Thanks to its expertise as a global integrator, VINCI Airports develops, finances, builds and manages airports by providing its investment capacity and its know-how in optimizing operational performance, modernizing infrastructures and managing their operations. environmental transition. VINCI Airports is the first airport operator to have committed to an international environmental strategy in 2016, to achieve the goal of net zero emissions across its entire network by 2050.

www.vinci-airports.com

¹ ASICS Corporation; Iwatani Corporation; Osaka Gas Co., Ltd.; Obayashi Corporation; OMRON Corporation; The Kansai Electric Power Company, Incorporated; Kintetsu Group Holding Co., Ltd.; Keihan Holdings Co., Ltd.; Suntory Holdings Limited; JTB Corp.; Sekisui House, Ltd.; Daikin Industries, Ltd.; Daiwa House Industry Co., Ltd.; Takenaka Corporation; Nankai Electric Railway Co., Ltd.; NIPPON TELEGRAPH AND TELEPHONE WEST CORPORATION; Panasonic Corporation; Hankyu Hanshin Holdings, Inc.; Rengo Co., Ltd.; The Senshu Ikeda Bank, Ltd.; Kiyo Holdings, Inc.; The Bank of Kyoto, Ltd.; THE SHIGA BANK, LTD.; The Nanto Bank, Ltd.; Nippon Life Insurance Company; Mizuho Bank, Ltd.; Sumitomo Mitsui Trust Bank, Limited; MUFG Bank, Ltd.; Resona Bank, Limited; and the Private Finance Initiative Promotion Corporation of Japan.

Blue carbon and Kansai Airports Group's Initiatives towards decarbonization

Dec 14, 2022



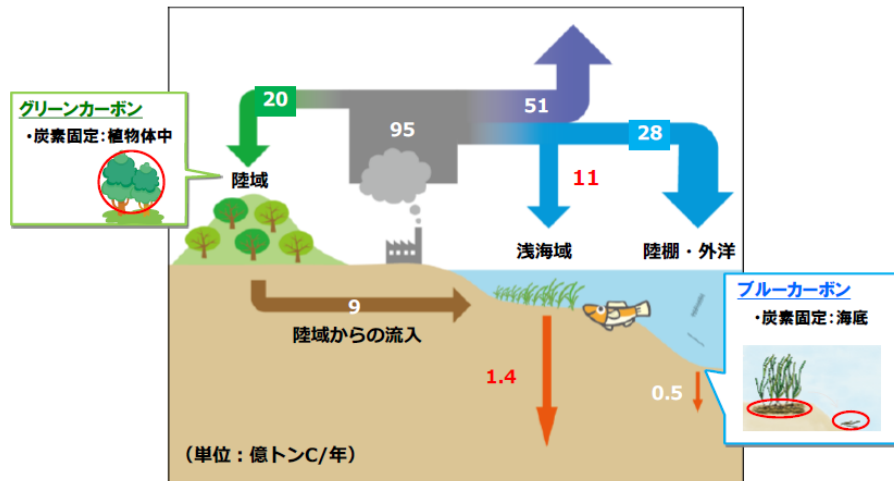
Shaping a New Journey



What is blue carbon?

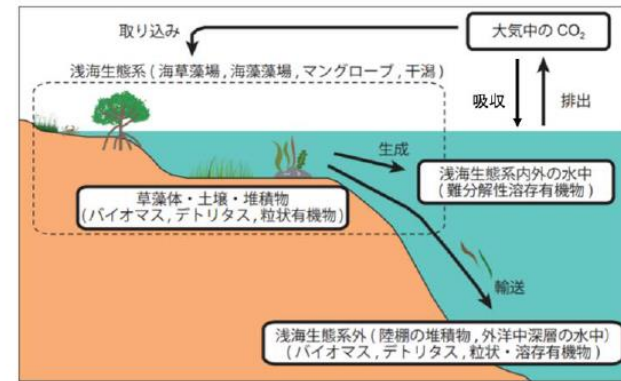
- Carbon stored in the ocean by the action of marine organism.
- Shallow-water plants absorb CO₂ through photosynthesis and store carbon at the bottom of the sea.
- Major ecosystems that store blue carbon include seagrass beds, seaweed beds, wetlands and tideland, and mangrove forests.
- In 2009, the United Nations Environment Programme (UNEP) released its report titled “Blue Carbon”, which presents the potential of the ocean as a CO₂ sink.

->There are great expectations for the use of blue carbon as a major initiative to achieve carbon neutrality.



出典：Kuwaie and Crooks (2021)を参考に作成

Figure 1-2 Carbon cycle of green carbon and blue carbon

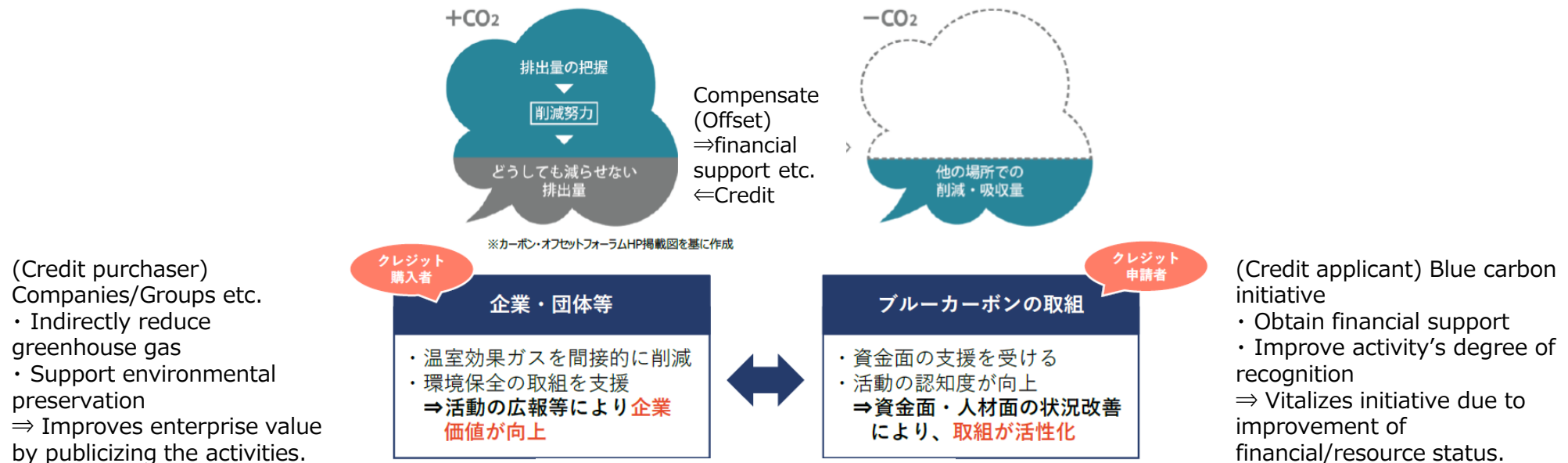


出典：桑江ら (2019)「浅海域における年間二酸化炭素吸収量の全国推計」

Figure 1-3 Mechanism of blue carbon absorption and accumulation

What is J Blue Credit?

- Tradable credits made by quantifying blue carbon.
- This refers to the amount of blue carbon absorbed and stored through the implementation of the project, and the amount of CO2 absorption verified by the J Blue Credit Review and Authentication Committee.
- Certified CO2 (J Blue Credit) can be transferred to others or used internally.
->Kansai Airports plans to use it for internal offset (for emissions that are difficult to reduce to zero despite various initiatives).

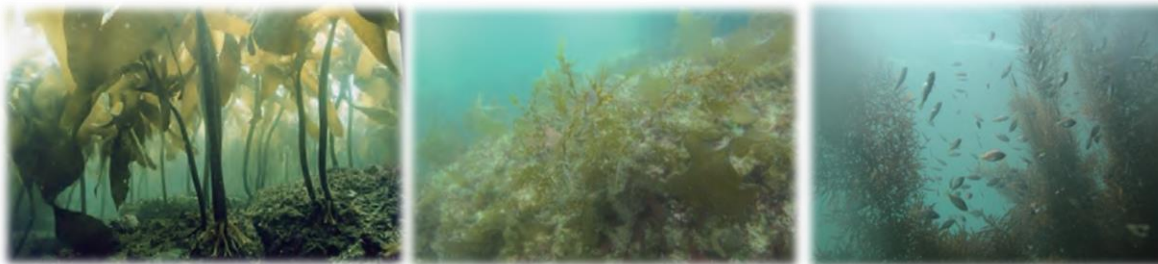
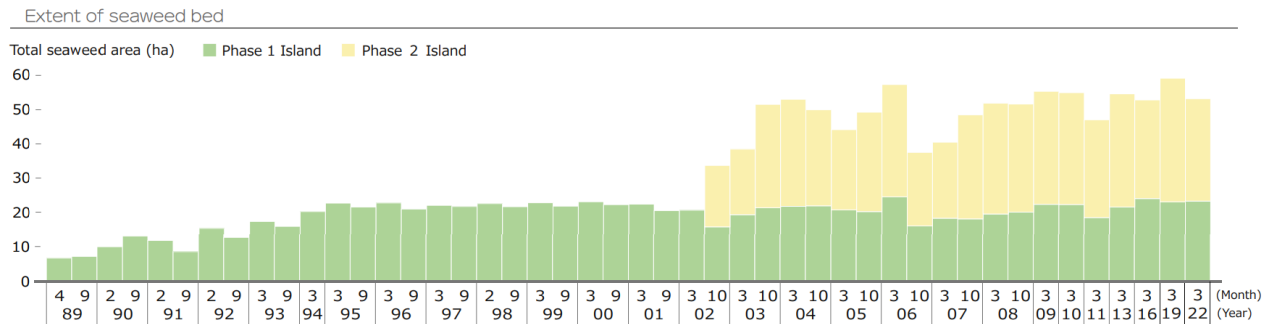
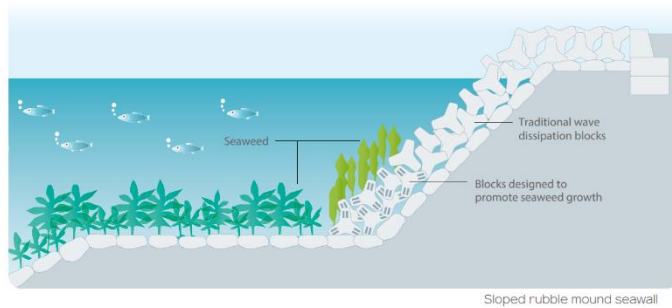


Kansai International Airport and Blue Carbon

Seaweed beds at Kansai International Airport

- We adopted gentle slope masonry revetment for majority of the seawalls (approx. 90%).
- A rich seaweed bed environment is created by light reaching a wide area, and we have been continuously monitoring, cultivating and maintaining the seaweed bed for many years.
- It is said that the seaweed bed around KIX accounts for approximately 20% of the total seaweed bed area in Osaka Bay, and the latest survey (March 2022) confirmed the area is 54 ha. It is an entity that can contribute not only to the supply of marine resources as spawning ground, breeding grounds and water purification, but also to the reduction of CO2 emissions.

->This time, we applied for and obtained J Blue Credit certification, utilizing our efforts to restore seagrass beds and years of monitoring experience.



The scene of Kansai International Airport Seaweed Beds



Seaweed beds regeneration

To realize Carbon Neutrality in 2050

Zero Emission Airport



Promotion of energy conservation



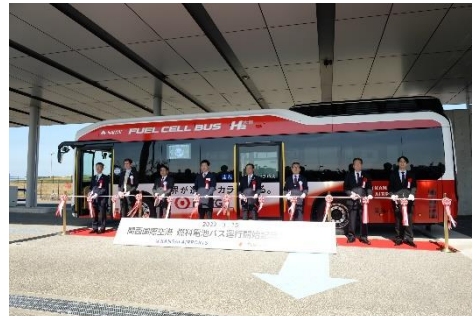
LED installation in terminal buildings

Use of renewable energy and hydrogen



Introduction of solar power generation

Promote introduction of ZEV



Fuel cell buses

CO₂ absorption



Creation of seaweed beds

Supply of fishery resources
water purification
CO₂ absorption
Furthermore,
Promoting and Contributing to
Community Collaboration
Using Seaweed Beds!



Adoption of LED for airfield lights



Hydrogen station



Fuel cell forklift



*1 Scope 1: Direct emission due to fuel combustion, Scope 2: Indirect emission by purchase of power

*2 Value calculated based on Airport carbon accreditation system by fiscal year. For Kobe Airport, it includes an estimated value before the operation by Kansai Airports Kobe began

*3 Includes green energy purchase etc.