

Toyo Seikan Group Environmental Data

1. Major Indicators of Environmental Performance
2. Addressing Climate Change
3. Reducing Waste
4. Management of Chemical Substances
5. Use of Water Resources
6. Preventing Air Pollution
7. Material Flows by Operating Company
8. Lawsuits and financial penalties related to environmental issues
9. Other Information

Scope of Data Collection

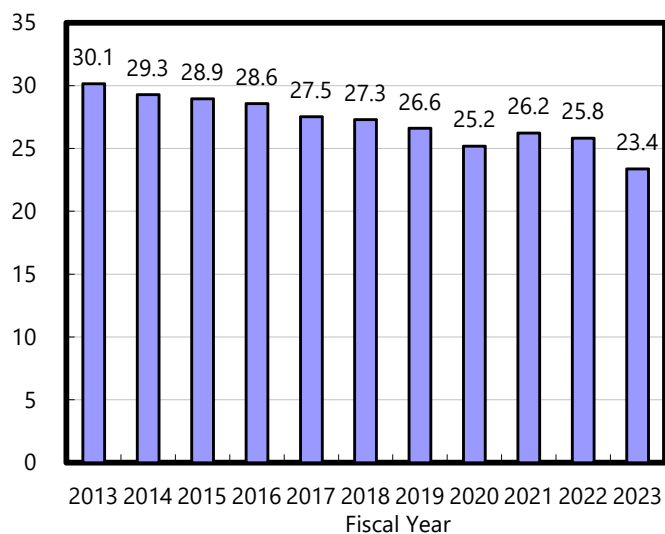
Toyo Seikan Group Holdings and its consolidated subsidiaries.

There are several tables and graphs with different data scopes, which are indicated at the relevant graphs and tables. Those marked with "<Domestic>" only include domestic consolidated companies.

1. Major Indicators of Environmental Performance

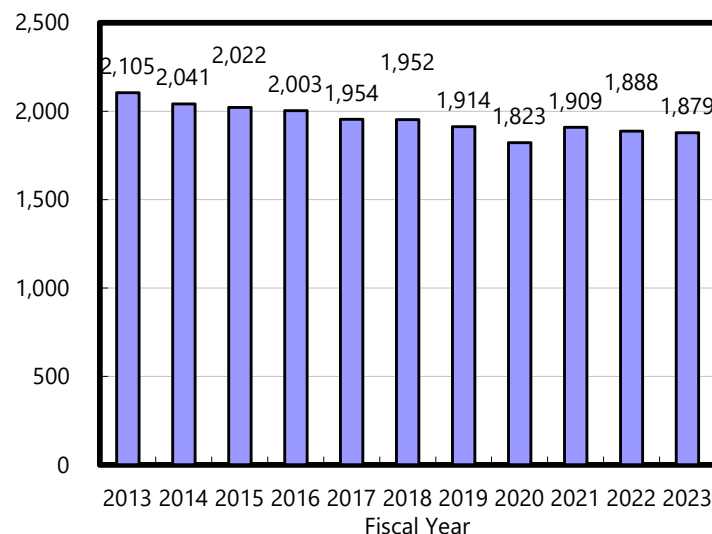
Energy Consumption*

(million GJ)



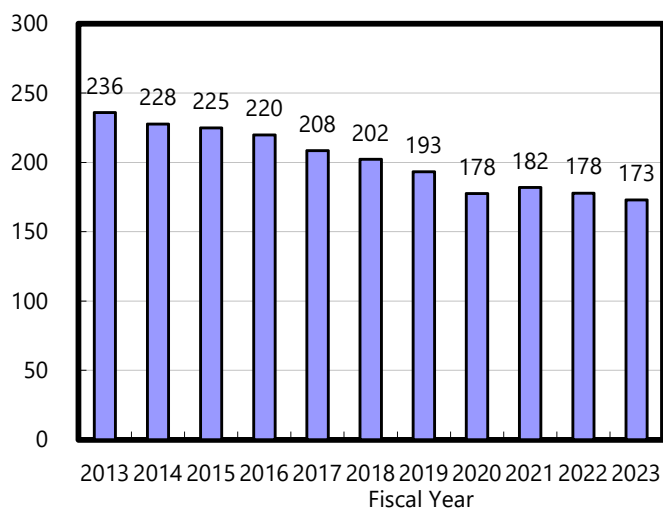
Purchased Electricity*

(million kWh)



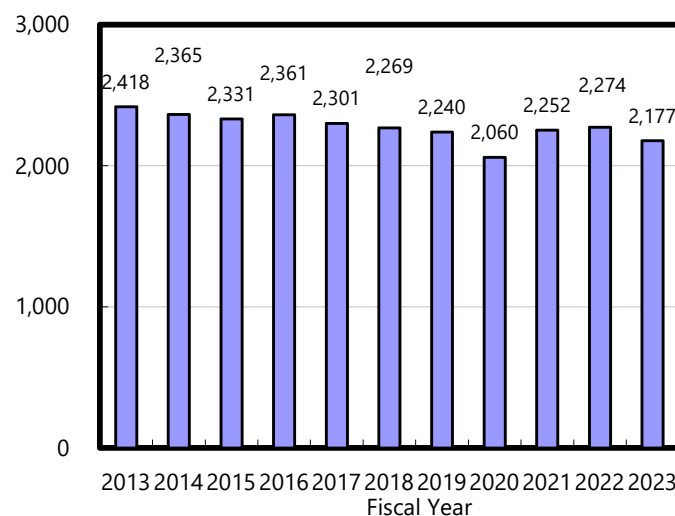
Fuel Consumption*

(thousand kl)
(oil equivalent)



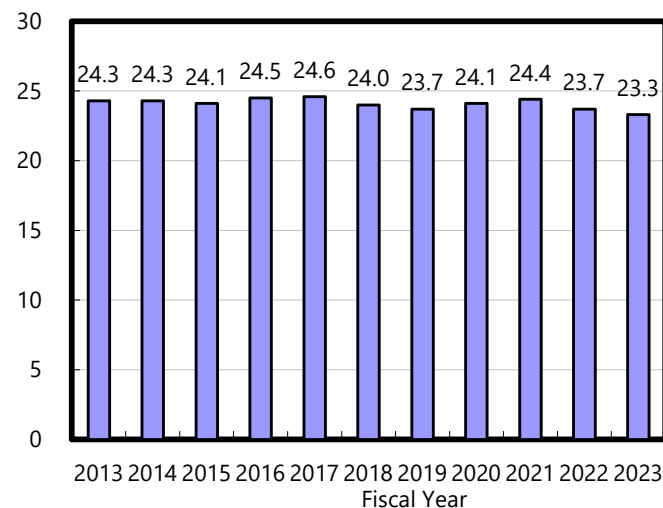
Raw Material Input*

(thousand tons)



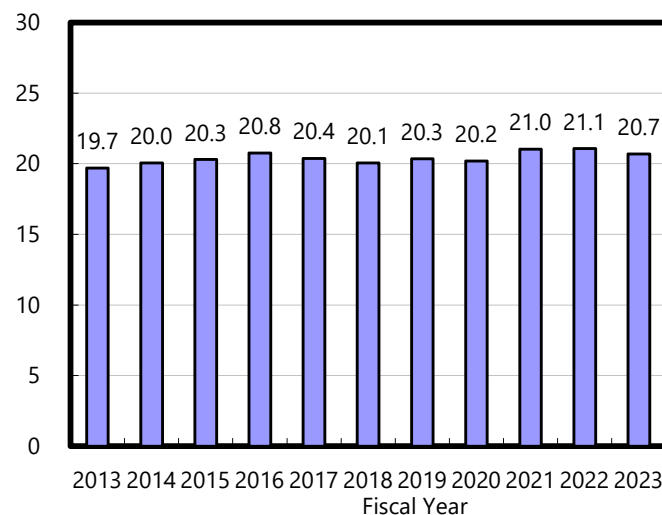
(million m³)

Water Withdrawal



(million m³)

Water Discharge*



Notes: In order to add and correct data for some locations, past data has been retroactively corrected.

2. Addressing Climate Change

GHG emissions from operations (scope 1 & 2)

Unit: thousand tons CO₂

		Fiscal Year										
Region		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Domestic	Scope 1	499	484	478	465	433	413	396	366	374	365	348
	Scope 2	1,085	1,039	996	961	938	890	821	740	766	619	589
	Total	1,584	1,523	1,474	1,426	1,371	1,302	1,217	1,106	1,140	984	937
Southeast Asia	Scope 1	32	35	38	37	37	38	35	30	29	29	28
	Scope 2	100	113	112	111	109	111	100	99	104	106	107
	Total	132	148	150	148	145	149	134	128	133	135	135
China	Scope 1	7	7	5	5	5	6	5	5	7	6	6
	Scope 2	48	44	38	38	34	28	31	35	41	39	45
	Total	55	50	42	43	39	34	36	40	48	45	51
Others	Scope 1	1	1	1	0	1	1	1	1	1	1	1
	Scope 2	4	4	5	5	5	5	6	7	8	8	7
	Total	4	5	6	6	5	6	7	7	10	9	8
Total	Scope 1	540	526	521	507	475	457	436	402	412	401	383
	Scope 2	1,236	1,200	1,151	1,116	1,086	1,033	958	880	919	772	747
	Total	1,776	1,726	1,672	1,623	1,561	1,491	1,394	1,282	1,331	1,173	1,131

Scope 1: Direct emissions from operations including fuel combustion

Scope 2: Indirect emissions from the use of purchased electricity, steam, etc.

Notes: In order to add and correct data for some locations, past data has been retroactively corrected.

GHG emissions from supply chain (scope 3)

Unit: Thousand tons CO₂

Category		FY2019	FY2020	FY2021	FY2022	FY2023
Category 1*	Purchased goods and services	4,299	3,911	4,326	4,216	4,085
Category 2	Capital goods	262	308	223	293	291
Category 3	Fuel- and energy-related activities (not included in scope 1 or scope 2)	233	220	235	233	234
Category 4*	Upstream transportation and distribution	221	209	223	252	253
Category 5	Waste generated in operations	18	29	24	18	22
Category 6	Business travel	5	3	3	5	5
Category 7	Employee commuting	13	13	12	14	13
Category 8	Upstream leased assets	3	2	2	0	0
Category 9	Downstream transportation and distribution	3	2	2	3	2
Category 10	Processing of sold products	158	156	178	181	169
Category 11*	Use of sold products	1,309	1,706	2,282	2,245	1,879
Category 12	End-of-life treatment of sold products	496	508	514	538	537
Category 13	Downstream leased assets	12	11	11	11	11
Category 14	Franchises	-	-	-	-	-
Category 15	Investments	90	88	100	85	95
Total		7,121	7,167	8,135	8,092	7,598

Notes: Due to a change in overseas engineering business calculation method, historical data has been retroactively adjusted as well.

3. Reducing Waste

(1) Amount of waste generated and change in status of recycling

Unit: ton

	Fiscal year										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total amount of waste (incl. valuable materials)	283,714	284,205	278,327	281,745	274,535	255,835	259,837	242,200	260,266	243,435	243,317
Landfilled (incl. simple incineration)	15,151	15,459	15,127	13,195	10,414	9,234	7,170	6,772	9,071	7,005	6,565
Others	10,109	10,108	9,973	8,293	8,545	6,001	6,757	7,575	9,567	6,182	6,557
Recycling rate	91.1%	91.0%	91.0%	92.4%	93.1%	94.0%	94.6%	94.1%	92.8%	94.6%	94.6%

<Domestic>

Unit: ton

	Fiscal year										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total amount of waste (incl. valuable materials)	266,652	265,446	258,947	264,302	256,497	241,712	244,381	227,001	242,432	229,299	225,270
Material recycling (incl. reuse)	248,207	247,067	239,540	244,884	239,782	225,861	231,769	212,590	226,090	216,356	214,357
Thermal recycling	5,175	5,593	6,549	7,258	7,746	8,131	6,607	8,634	8,262	6,522	4,818
Landfilled (incl. simple incineration)	13,270	12,787	12,858	12,160	8,969	7,720	6,005	5,777	8,081	6,421	6,095
Recycling rate	95.0%	95.2%	95.0%	95.4%	96.5%	96.8%	97.5%	97.5%	96.7%	97.2%	97.3%

(2) Generation of hazardous waste (waste acid, alkali, oil, paints, inks and solvent) and change in status of recycling

< Status at Toyo Seikan Co., Ltd. >

Unit: ton

	Fiscal year										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Amount of waste	1,382	1,459	1,325	1,300	987	991	1,377	1,250	1,472	1,492	1,199
Recycled	1,382	1,459	1,325	1,300	987	991	1,377	1,250	1,472	1,492	1,199
Landfilled	0	0	0	0	0	0	0	0	0	0	0

4. Management of Chemical Substances

(1) Release and transfer of chemical substances under Japan's Pollutant Release and Transfer Register (PRTR) Law

<Domestic>

Unit: ton

	Fiscal year										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Released/transferred amount of chemicals subject to PRTR	522	521	508	503	492	513	477	432	431	435	1,154

Notes: In order to add and correct data for some locations, past data has been retroactively corrected.

(2) Emissions of volatile organic compounds (VOC)

< Status at Toyo Seikan Co., Ltd. >

Unit: ton

	Fiscal year										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
VOC emissions	2,224	2,278	2,234	2,287	2,518	2,558	2,667	2,678	2,767	2,847	2,690

5. Use of Water Resources

(1) Water withdrawal

Unit: thousand m³

		Fiscal year										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Domestic	Clean water	7,469	8,379	8,249	8,361	8,425	8,065	7,810	7,813	8,181	7,641	7,022
	Industrial water	11,451	10,175	10,591	10,520	10,520	10,415	10,412	10,554	10,399	10,107	9,994
	Groundwater	2,137	2,183	1,970	1,924	2,090	2,015	1,975	1,802	1,854	2,130	2,239
	Recycled water	23	29	29	29	31	32	32	13	11	13	18
	Rainwater	9	8	8	8	8	8	9	8	9	7	7
	Subtotal	21,090	20,773	20,847	20,843	21,074	20,535	20,237	20,190	20,454	19,899	19,280
Overseas	Clean water	3,220	3,524	3,278	3,581	3,478	3,360	3,391	3,874	3,928	3,743	4,031
	Groundwater	0	0	0	121	87	56	85	51	18	10	5
	Subtotal	3,220	3,524	3,278	3,702	3,565	3,416	3,477	3,925	3,947	3,753	4,036
Total water withdrawal		24,309	24,297	24,124	24,544	24,639	23,951	23,714	24,115	24,401	23,650	23,316

(2) Water discharge

Unit: thousand m³

		Fiscal year										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Domestic	Public water bodies (Seas)	13,572	14,186	14,744	14,872	14,717	14,335	13,956	13,901	14,519	13,643	13,049
	Public water bodies (Rivers)*	3,226	2,960	2,800	2,281	2,417	2,333	2,863	2,758	2,781	3,090	3,202
	Sewage systems*	771	720	643	1,375	1,261	1,341	1,317	1,241	1,221	1,226	1,223
	Domestic total	17,569	17,867	18,187	18,528	18,394	18,010	18,135	17,899	18,521	17,959	17,474
Overseas: Public water bodies (Rivers)*		2,126	2,177	2,108	2,224	1,988	2,050	2,202	2,282	2,501	3,104	3,221
Total water discharge		19,694	20,043	20,296	20,752	20,382	20,060	20,337	20,181	21,022	21,063	20,695

Notes: In order to add and correct data for some locations, past data has been retroactively corrected.

(3) Water-related risk assessment

We have evaluated the dependency and impact of our business activities on a total of 93 major production sites both domestically and internationally using Aqueduct, a global water risk assessment tool advocated by the World Resources Institute (WRI), as well as the TNFD disclosure tool "ENCORE" developed by institutions such as the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCSC) and the Natural Capital Finance Alliance (NCFA).

Based on the results of each assessment, we will calculate the management scores of the facilities and provide feedback to support their continued efforts, thereby reducing water-related risks.

6. Preventing Air Pollution

Emissions of air pollutant

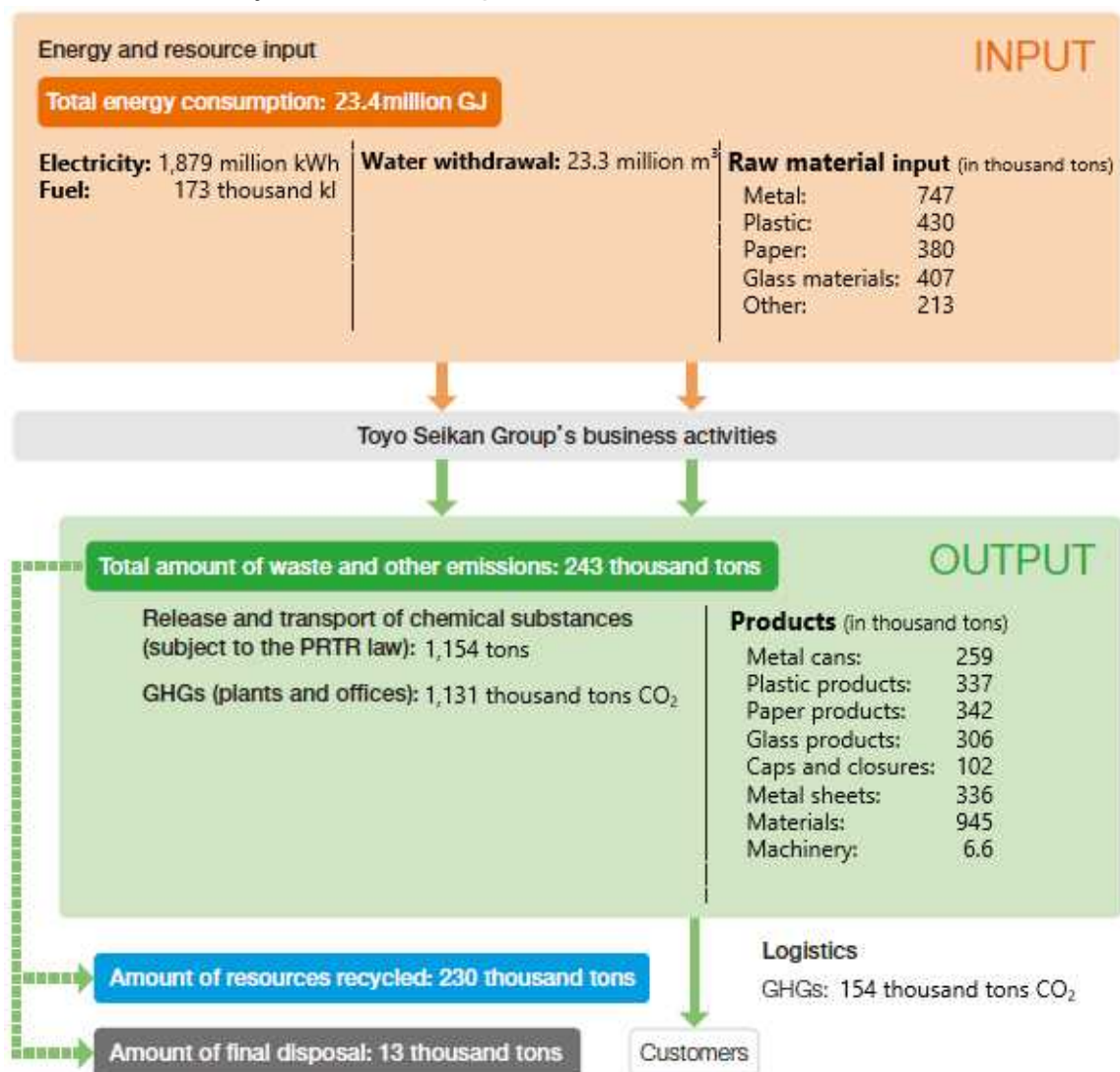
<Domestic>

Unit: ton

		Fiscal year										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Nox		383	400	404	394	366	354	340	304	333	293	289
Sox		631	805	857	965	722	680	710	666	686	678	622

7. Material Flows by Operating Company

Material flows of Toyo Seikan Group (FY2023)



Input/output data of major group companies (FY2023)

	INPUT(Usage)					OUTPUT						
	Materials (thou. tons)		Energy		Water withdrawal (thou. m³)	Production (thou. tons)		GHG emissions (thou. tons)	Waste			
			Electricity (mil. kWh)	Fuel (thou. kl of oil equivalent)					Waste (ton)	Recycled (ton)	Landfilled (ton)	Recycling rate
Toyo Seikan	Metals	221	721	33	2,459	Metal products	182	277	8,713	8,710	4	99.9%
	Plastics	250				Plastic products	251					
	Other materials	23										
Toyo Kohan	Metals	359	244	21	11,321	Metal products	321	176	7,939	2,949	4,990	37.1%
	Plastics	10				Plastic products	5					
Tokai Kogyo	Plastics	18	90	2	161	Plastic products	10	39	5,655	5,625	30	99.5%
	Paper	55				Paper products	54					
Nippon Closures	Metals	12	129	2	245	Metal products	9	60	553	510	44	92.1%
	Plastics	61				Plastic products	58					
Toyo Glass	Glass	316	93	64	365	Glass products	297	173	816	641	176	78.5%
Mebius Packaging	Plastics	45	130	0.2	236	Plastic products	62	48	223	219	4	98.4%
Toyo Aerosol Industry	Other materials	50	17	2	266	Aerosol products/ filled products (mil. units)	231	10	1,229	1,229	0	100.0%
TOMATEC	Other materials	12	8	3	363	Other products	11	5	944	848	96	89.8%

8. Lawsuits and financial penalties related to environmental issues

There have been no lawsuits against, or fines imposed on, the Toyo Seikan Group with respect to environmental regulations during fiscal 2023.

	Scope of Survey	Fiscal year			
		2020	2021	2022	2023
Lawsuits and financial penalties related to environmental issues	Case	0	0	0	0
	Yen	0	0	0	0

9. Other Information

■ Example of our initiatives to address environmental issues in the supply chain

<Addressing Marine Plastic Pollution>

- Engagement through Clean Ocean Material Alliance -

Marine plastic pollution is a pressing global issue. To tackle this problem, it is essential for both public and private sectors to collaborate in promoting more sustainable use of plastic products, as well as in the development and introduction of alternative materials. In light of such circumstances, in January 2019, the Clean Ocean Material Alliance (CLOMA) was established with a wide range of business operators involved in the supply chain. As of July 2024, it consists of 508 companies and organizations from various industries. Toyo Seikan Group Holdings has been involved since the preparatory stage as a managing partner and has been actively participating as a key member of the Dissemination & Promotion Working Group, fostering information sharing and collaboration across different industries.

Furthermore, the Group has been actively involved in all five working groups of CLOMA, which were established to implement the Action Plan launched in 2020. The Group has been contributing to the planning of demonstration tests among other tasks. Through these activities, we will continue to contribute to the solution of marine plastic pollution.

<Joining Japan Blue Carbon Network>

Interest in blue carbon has increased in recent years from the perspectives of Sustainable Development Goals (SDGs) of "climate action" (goal 13) and "life below water" (goal 14). As well as plants on land, seagrasses and seaweeds absorb CO₂ when they grow. The carbon stored in coastal and marine ecosystems is known as blue carbon.

Toyo Glass, possessing the technology of sustained-release water-soluble glass*, has been contributing to the promotion of blue carbon ecosystems, including the restoration of seaweed beds, by utilizing the characteristic of the active ingredients in the glass slowly dissolving into water.

Toyo Seikan Group Holdings has recently become a supporting member of the Japan Blue Carbon Network, a non-profit organization.

We have been actively involved in sharing information about domestic and international initiatives related to blue carbon and seaweed bed restoration, as well as providing support for these initiatives.

Additionally, we have been disseminating information about climate change and marine ecosystems. In October 2022, we participated in a seminar and an on-site workshop held by the Japan Blue Carbon Network in Atami City, Shizuoka. In February 2023, we also discussed new approaches to blue carbon issues with other members.

We will continue to protect marine biodiversity and combat climate change, cooperating with diverse research institutions, organizations and companies engaged in blue carbon activities.