

Introducing recent activities of CCCA as a national platform

Overview of private sector team's activities

The 4th International Climate Change Adaptation Platforms Meeting

15 Dec 2023 @TKP Tokyo Station Conference Center

**CCCA, NIES
Private Sector Team**



Goals of Private Sector Team

■ Long-term goal (10-20 years in the future)

- To become a COE center for both research and private sector fields

■ Mid-term goal (Goals including the next mid- to long-term Plan, 2026-2030)

- To establish NIES's presence. NIES to lead in implementing projects in collaboration with businesses and local governments, etc.

■ Goals for the present mid- to long-term Plan

- Enhancement of A-PLAT adaptation information. Build and expand network with related parties (ministries, agencies, business operators, etc.)
- Formulate a policy on how to cooperate with business operators, etc. in the next mid-term plan.

■ Goal for 2023

- To promote collaborative network activities. Enhancement of examples of business initiatives.
- To collect and disseminate prompt information. To consider measures for collaboration among businesses.

Private Sector Team for 2023

■ Team Leader : *Dr. Kazutaka Oka*

- Planning, operation, and progress management related to all aspects of the team's operations

■ External collaboration : *Jun Sunagawa*

- Public-Private-Academic Networking Meeting on Climate-related Risks in Japan, Climate Scenarios Roundtable, etc.

■ Adaptation efforts by private sector : *Fuyuki Harada*

- Examples of efforts by private sector, etc.

■ Information collection : *Tamiko Nakagawa*

- Collection of information related to domestic and international adaptation efforts, etc.

■ Admin・Coordination : *Yuko Watanabe*

- Administrative work related to the team (schedule coordination, ML, response to inquiries, etc.)

A-PLAT

■ Climate Change Adaptation Information Platform (A-PLAT)

- Provide information on scientific findings and related information on adaptation to stakeholders such as local governments, **private sector**, and individuals



Adaption for Private Sector

Provides case studies and reference materials of private sectors that are engaged in "climate risk management" and "adaptation business".

Adaptation for Individuals and Communities

Basic knowledge about adaptation is introduced

Also provides information on events, and news on the development of adaptation plans by local governments and the establishment of regional adaptation centers.

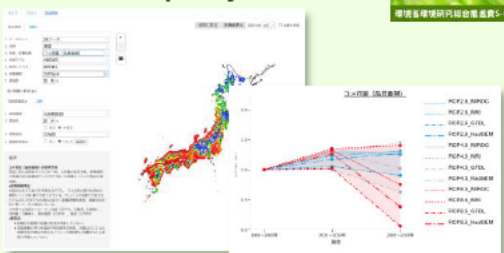
A-PLAT: WebGIS

■ National- and prefectural-level meteorological observation data and future impact predictions (WebGIS)

● Annual mean temperature



● Rice yield (Focus on quality)



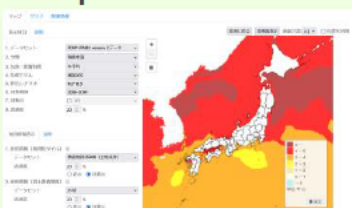
● Flood/River overflow (Annual Expected Maximum Flood Depth)



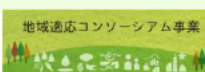
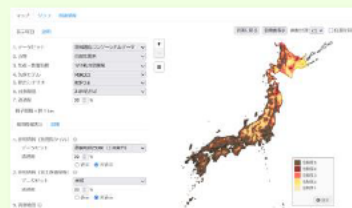
● Slope failure probability



● Sea surface temperature

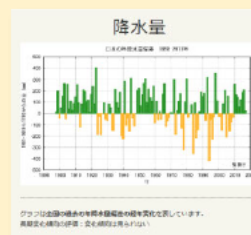
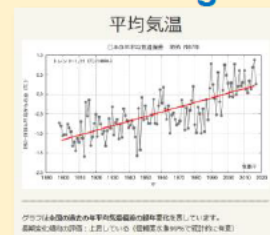


● Zone for pine dying



Observation data by meteorological stations

4 indicators are listed



● Number of extremely hot days per year

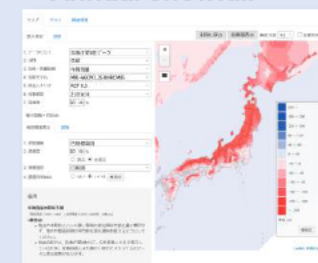


Vol.9 Data by Japan Meteorological Agency

18 indicators are listed



● Annual snowfall



● Annual maximum daily precipitation

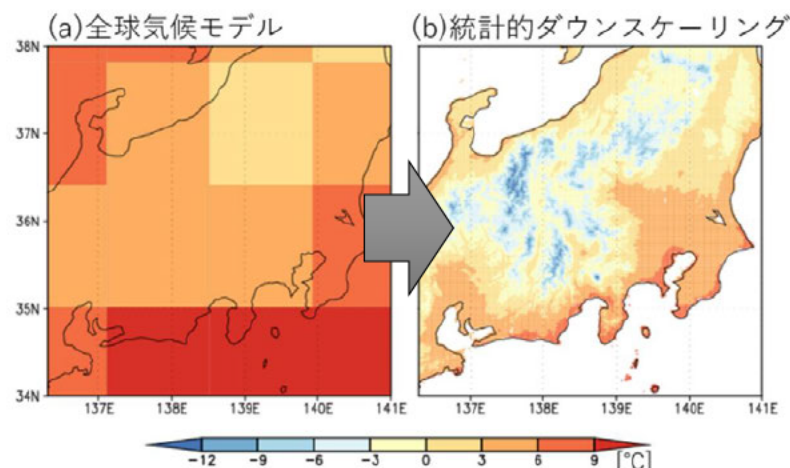


A-PLAT: Climate and demographic scenarios

■ Bias-corrected climate scenario data for Japan

- Climate scenario data based on the CMIP6 dataset

<https://www.nies.go.jp/doi/10.17595/20210501.001.html>



■ Population estimates by municipality according to socioeconomic scenario

- Population and mesh population scenarios by municipality in Japan

<https://adaptation-platform.nies.go.jp/socioeconomic/population.html>

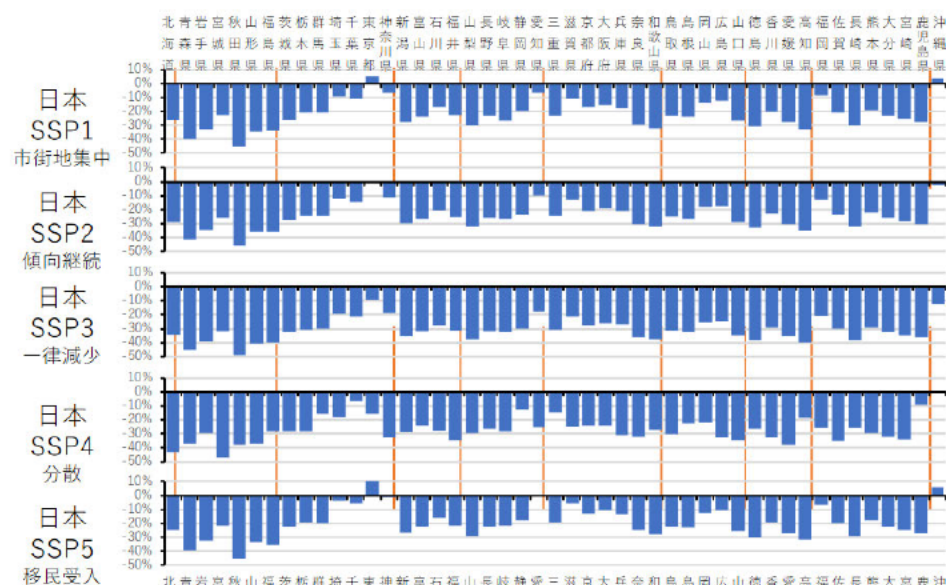


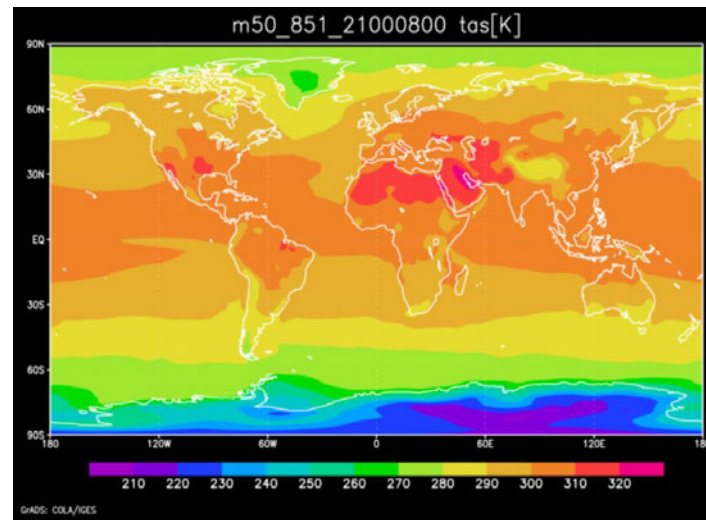
図-4 日本 SSP 別都道府県別 2050 年の 2015 年比人口推計結果

A-PLAT: Climate scenarios

■ A-PLAT Pro

- Provides the collected climate model information for distribution through A-PLAT Pro (registration is required for use). → <https://ccca-scenario.nies.go.jp/>
- Can be used as boundary conditions in specialized simulations.

Dataset	Domain	Terms of Use	Remarks
CMIP5	Globe	Public ¹⁾	Original data
CMIP6	Globe	Public ²⁾	Original data
CMIP3	Globe	Public ³⁾	
ISIMIP-FT	Globe	Public ⁴⁾	Bias-corrected
ISIMIP-2b	Globe	Public ⁴⁾	
d4PDF	Globe	Public ⁴⁾	
d4PDF	Globe	Public ⁴⁾	
Historical	Globe	Public ⁵⁾	Gridded historical climate data
NHRCM02	Japan	Limited ⁶⁾	Original data
NARO2017	Japan	Limited ⁶⁾	Bias-corrected
NIES2019 Ver1	Japan	Public ⁴⁾	Bias-corrected
NIES2019 Ver2	Japan	Public ⁴⁾	Bias-corrected
NIES2020	Japan	Public ⁴⁾	Bias-corrected



- 1) Please read the Terms of Use before use
- 2) Please read the Terms of Use before use
- 3) Citation required for use
- 4) Please follow the instructions of the data developer
- 5) Registration required for use

A-PLAT: Adaptation for private sector

■ Reference data/Examples of adaptation efforts

HOME > 事業者の適応

事業者の適応



「事業者の適応」では、事業者向けの気候変動適応情報を提供しています。事業者向けの情報・資料、取組事例、イベント等を確認できます。事業活動における適応の取組を進めるためにご活用ください。

情報・資料 ▼ 取組事例 ▼ イベント情報 ▼

情報・資料

事業者の気候変動適応に関する情報・資料を紹介しています。事業者における気候変動影響や適応についての理解を深めたり、取組を検討したりする際の情報収集にご活用ください。

民間企業の気候変動適応ガイド

事業者の適応に関する参考資料

影響評価情報

環境省が作成した民間企業のためのガイドです。



気候変動適応に関する参考資料です。海外資料（仮訳）も掲載しています。



影響評価情報及び影響評価ツール（リスク評価ツール）を紹介しています。



取組事例

事業者による適応に関する実際の取組事例を紹介しています。取組事例は「気候リスク管理」と「適応ビジネス」に分類しています。

気候リスク管理の事例

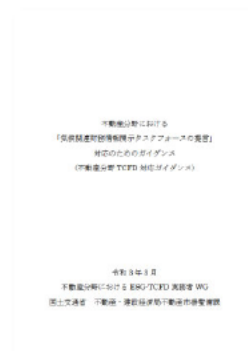


「気候リスク管理」とは、自社の事業活動において、気候変動から受ける影響を低減させるための取組です。

適応ビジネスの事例



「適応ビジネス」とは、適応を自社のビジネス機会として捉え、他者の適応を促進する製品やサービスを展開する取組です。



Examples of reference data listed in A-PLAT

A-PLAT: Adaptation efforts by private sector

■ Adaptation efforts by private sector

- **Climate risk management** : Initiatives to reduce the impact of climate change on business activities.
- **Adaptation business** : Initiatives to develop products and services that promote the adaptation of others by taking adaptation as a business opportunity.
- **TCFD** : Initiatives related to TCFD

■ Examples of Climate Risk Management (22 cases)

This section displays a grid of 22 case studies for climate risk management. Each case includes a company logo, name, and a brief description of their initiative. The companies shown include Ajinomoto, Docomo, and others. The initiatives focus on various aspects of climate risk management, such as reducing greenhouse gas emissions, improving energy efficiency, and developing climate-resilient products.

■ Examples of Adaptation Business (127 cases)

This section displays a grid of 127 case studies for adaptation business. Each case includes a company logo, name, and a brief description of their initiative. The companies shown include Toyo, Sekisui, and others. The initiatives focus on developing products and services that promote adaptation, such as climate-resilient construction materials, disaster prevention services, and climate-resilient infrastructure.



「事業者の適応」では、事業者向けの気候変動適応情報を提供しています。事業者向けの情報・資料、取組事例、イベント等を確認できます。事業活動における適応の取組を進めるためにご活用ください。

取組事例

事業者による適応に関する実際の取組事例を紹介しています。取組事例は「気候リスク管理」と「適応ビジネス」に分類しています。

This section compares 'Climate Risk Management' and 'Adaptation Business'. It includes icons, text, and small images illustrating the concepts. Climate Risk Management focuses on reducing the impact of climate change on business activities, while Adaptation Business focuses on developing products and services that promote adaptation.

TCFDに関する取組事例

This section features a case study related to the TCFD (Task Force on Climate-related Financial Disclosures). It includes a logo, text, and a small image. The case study describes how a company has implemented TCFD-aligned climate risk management practices.

■ TCFD (23 cases)

A-PLAT: Infographic

- **Infographic** to visually represent the impacts and adaptations by sector
- Ten industries are shown by sector, including "Buildings and facilities", "Employees" and "Clients" for all sectors

気候変動の影響と適応策（事業者編）

建設業

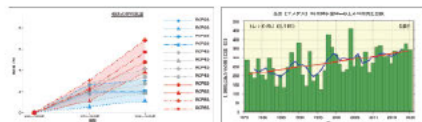
影響の要因

気候変動による気温の上昇、極端な気象事象の発生頻度や強度の増加、強い台風の増加、海面水位の上昇などが影響を及ぼす。



現在の状況と将来予測

平均気温の上昇、極端な降水の発生頻度や強度の増加、強い台風の増加、それらに伴う河川の洪水や内水氾濫、土砂災害の発生頻度の増加がみられ、建築物やインフラへの影響が生じている。将来、気候変動が進行すれば、さらに影響の程度・発生頻度は増加すると考えられる。



将来の平均気温（排出シナリオと気候モデルに対する年平均気温の増大予測）（基準期前年との差）出典：A-PLAT

全国の1時間降水量50mm以上の年間発生回数の経年変化 出典：気象庁ホームページ

熱中症の救急搬送者数の増加傾向が確認され、過去5年間の職場における熱中症による死者数、死傷者数は、ともに建設業が最大。今世紀末には、東京・大阪で日中に屋外労働可能な時間が現在よりも30～40%短縮することが予測されている。

適応策

激甚化する気象災害（豪雨、台風、洪水など）に対するハード・ソフト両面の対策や、気候変動がもたらす工事現場の労働環境悪化を改善する取組などがある。また、気候レジリエンスの高い商品開発や施工の省力化に向けたロボット開発など適応ビジネスの発展が見込まれる。

要因	気温の上昇、極端な気象事象の発生頻度や強度の増加			
	主要事業	市場・顧客	適応ビジネス	
影響	工事現場への影響	建築物・インフラへの影響	市場の変化	商品・サービス開発
	・工事現場の被災 ・気温上昇等労働環境の悪化	・建築物・インフラ等の損傷や性能劣化	・気候レジリエンス／環境性能の高い建物・インフラへのニーズの高まり ・防災・減災工事、維持管理復旧工事需要の拡大	・気候レジリエンス／環境性能の高い建物・インフラへのニーズの高まり ・気温上昇等労働環境の悪化
適応策	■ BCPの策定・運用 ■ 気象情報の早期入手と防災対策の実施 ■ 労働環境の改善	■ 建築物・インフラのレジリエンス強化 ■ 重要設備の上層階への配置 ■ 性能確保のための設計基準の見直し	■ 気候レジリエンス／環境性能の高い建物の建設 ■ 防災・減災工事への注力 ■ メンテナンス・リニューアル工事への注力 ■ 復旧工事への対応	■ 気候レジリエンスの高い建物・インフラの商品開発 ■ ZEB・ZEH等環境性能の高い建物の商品開発 ■ 建設ロボットの開発

https://adaptation-platform.nies.go.jp/private_sector/infographic/pdf/01-construction.pdf

Symposiums for private sector

■ Past symposiums

- **1st (November, 2017)**
 - GCF, TCFD, Examples of efforts
- **2nd (August, 2019)**
 - Climate Change Adaptation Act , Application examples of climate risk information, TCFD
- **3rd (October, 2020)**
 - Climate Change Adaptation Act , Climate risk management, Adaptation business
- **4th (October, 2021)**
 - Scientific findings , National initiatives , TCFD (Physical risks)
- **5th (October, 2022)**
 - Application examples of climate change risk information ・Issues・Prospects
- **6th (28th November, 2023)**
 - Trends in non-financial information disclosure and Responses of financial institutions , TCFD (Physical risks) , National initiatives, Scientific findings

The 6th Symposium for Private Sector

プログラム	登壇者
開会挨拶	環境省
1 Trends in non-financial information disclosure on climate change risks and financial institutions' responses	
ISSB の確定基準	IFRS 財団 ISSB 理事 小森 博司 氏
気候変動に伴うリスクに対する千葉銀行の取組	千葉銀行経営企画部 SDGs 推進室長 石井 廉 氏
投資家の観点から見た企業の気候変動リスクへの対応	日興リサーチセンター株式会社 取締役研究所担当カーボンプライシング研究室長 本山 典 氏
2 Addressing supply chain risks and leveraging opportunities in TCFD response	
気候変動リスク・機会に対するサステナビリティビジネスモデルを通じた取り組み	株式会社ブリヂストン G 環境戦略推進部 部長 中島 勇介 氏
東レの TCFD 対応におけるサプライチェーンリスクへの対応と機会の活用について	東レ株式会社 常任理事経営企画室担当サステナビリティイノベーション戦略グループ 野中 利幸 氏
休憩	
3 National efforts and latest scientific findings related to climate change	
文部科学省 研究開発局 環境エネルギー課 環境科学技術推進官 松原 太郎 氏	
国土交通省 水管理・国土保全局 河川計画課 河川技術調整官 小澤 盛生 氏	
金融庁 総合政策局 総合政策課 サステナブルファイナンス推進室 亀井 茉莉 氏	
4 Panel discussion	
Topic: Strengthening corporate resilience to climate change risks	
モデレーター：国立環境研究所 気候変動適応センター 主幹研究員 岡 和孝	
パネラー：登壇者の方々	
閉会	

Public-private-academic network on climate-related risks in Japan

■ Concept

Background :

- Growing need for information on climate change and climate change impacts (mainly physical risks)
- Lack of physical risk information for private companies to conduct risk/scenario analysis in TCFD, etc.

Objective :

- To establish a forum for exchanging opinions and collaboration in order to understand the needs for climate change risk information, to enhance the information infrastructure such as the provision of information in line with those needs, and to promote the utilization of climate change risk information.

Start : September 2021

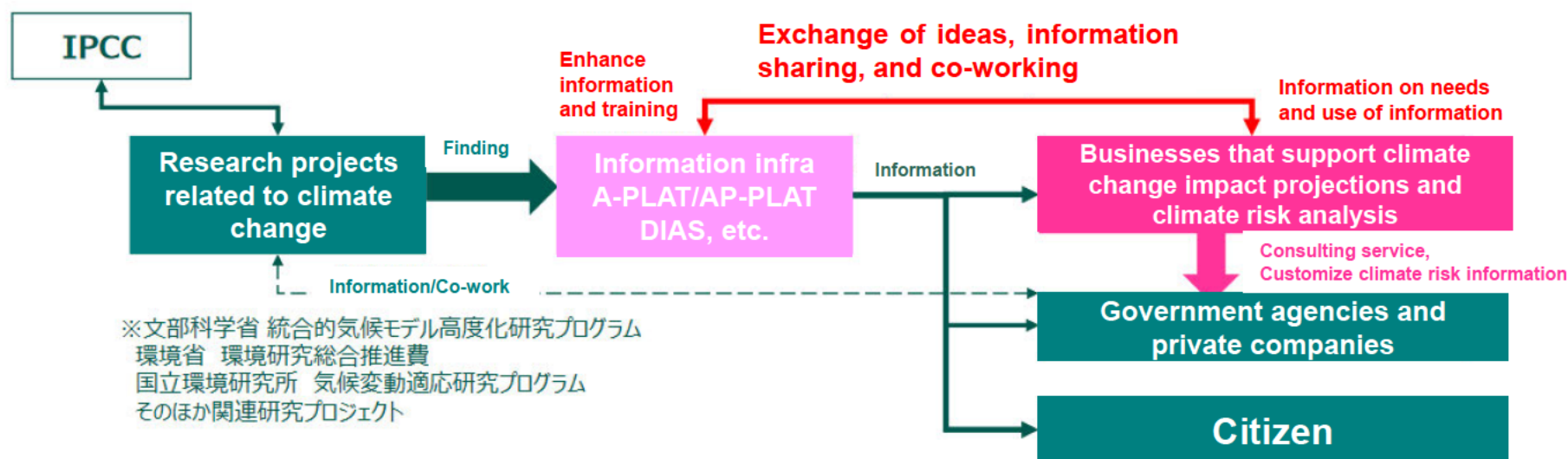
Organizers : Ministry of the Environment (MOE) ; Ministry of Education, Culture, Sports, Science and Technology (MEXT) ; Ministry of Land, Infrastructure, Transport and Tourism (MLIT) ; Financial Services Agency (FSA) ; National Institute for Environmental Studies (NIES)

Participants : Companies that utilize climate change risk information (mainly physical risks) and provide consulting services, etc. (56 companies as of October 2023)

Public-private-academic network on climate-related risks in Japan

■ Activities

- Exchange of opinions on climate risk information infrastructure
- Study sessions and seminars on scientific findings and technologies (once every few months)
- Establishment of thematic section meetings
- Symposiums for Private Sector (←just held in November, 2023)



Public-private-academic network on climate-related risks in Japan

① Public-private-academic networking meeting on climate-related risks in Japan

- Approx. twice/year
- Information sharing on the latest trends in climate change risks, exchange of opinions on network activities, etc.

② Study sessions and seminars for participating companies

- Approx. once/1 to 2 months, Online seminars, 2 hours each time
- To be held on themes related to the needs of participating companies and the latest trends

③ Section meetings and joint research activities

- To be held by inviting volunteer participants (about 2 themes, several times/year)
- Discussions on trial scenario analysis using climate change impact information and how to provide information necessary for the TCFD
- To reflect the results of the section meetings in the contents of A-PLAT, etc.
- In addition, joint research with other organizations (SIP) is ongoing.

④ Information sharing through the mailing list

- Sharing information on events held by the organizers, and the latest information on the climate scenarios and climate change impact projections
- Sharing of event information from participating companies, etc.

Questions

① Effective ways to provide physical risk information

- Are you working with the private sector on providing physical risk information?
- What specific efforts are you making? Are there any points that you have been successful?
- How often and with which parties do you exchange views?
- Are there any tools you have developed or are using in your private sector efforts? (e.g. infographics, risk assessment tools, etc.)
- What are some of the challenges you face in promoting adaptation to the private sector?

② Dialogue and collaboration with industry associations

- Do you engage in dialogue and collaboration with industry associations?
e.g. Business associations, financial associations (IFRS, ISSB), etc.

③ Cooperation with “Municipalities x Companies”

- Do you work with “Municipalities x Companies” in any way related to the promotion of adaptation?

Questions

③ Relationship with consulting firms (that provide physical risk information, TCFD scenario analysis support)

- Do you define the differentiation of your activities from consulting firms?

④ Initiatives related to TNFD

- Are you implementing any initiatives related to TNFD, which has become a hot topic in recent years?

⑤ What we, as a public institution, should aim for in terms of support for the private sector

- What should we, as a public institution (not a consulting firm), aim to do to support the adaptation activities of the private sector?

Thank you for kind attention