



Unlocking Green Finance for Drought Resilience: Opportunities for DPI Action in the OTS Region



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About the DPI

The Drought Prevention Institute (DPI) of the Organization of Turkic States aims to identify and support the implementation of multilateral development projects that enhance drought resilience and water security across the Turkic region. By fostering cooperation among member states and partners, DPI seeks to mobilize knowledge, finance, and innovation to address the growing challenges of climate change and water scarcity.

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1. Executive Summary

Drought is one of the most significant economic, social, and environmental challenges for the countries of the Organization of Turkic States (OTS). Climate change is worsening and amplifying water scarcity, land degradation, and economic production losses across the region, with growing impacts on food security, infrastructure, and long-term economic development potential. Drought prevention and water resilience generate substantial social and environmental co-benefits, but they also represent a major financing challenge. Public financing alone is not sufficient to meet the volume of investment required. Therefore, the mobilization of private and blended capital is essential.

With this background, our study examines how green and sustainable finance can support drought prevention in the OTS region and how the Drought Prevention Institute (DPI) can contribute to strengthening this link. Our analysis shows that most OTS members have made tangible progress in establishing the foundations of sustainable finance. Central banks and financial regulators are increasingly active, green taxonomies and ESG-related guidelines are being developed, and in some countries, we have seen successful sovereign or private green bond issuances. At the same time, the sustainable finance markets remain uneven and relatively shallow, with limited volumes and instrument range, and a strong focus on mitigation-oriented investments. Drought prevention, water management, and adaptation are still underrepresented in the respective financial markets.

A key finding of our study is that the link between drought prevention and green finance is crucially important and should be articulated. Drought-related investments often face barriers related to risk assessments, income generation challenges, longer investment horizons, data gaps, and in some cases also limited project preparation capacity. Sustainable finance frameworks, taxonomies, green and sustainability-linked instruments, risk-sharing instruments all offer concrete tools to address these barriers and improve overall project bankability. The strong demand signal to DPI's recent Expression of Interest call, completed in October 2025, further confirms that the region has a growing number of drought-related project concepts, all needing financing.

Drawing on a SWOT analytical framework, our study identifies several priority areas for potential DPI involvement. These include addressing capacity and knowledge gaps at financial institutions and public authorities (central banks, supervisors, ministries); supporting the development of adaptation- and drought prevention-oriented financial instruments, promoting regional cooperation and peer learning among OTS member states. These efforts can build on broader regional frameworks such as the *Turkic Green Vision*, which provides a common strategic framework for advancing sustainability, climate resilience, and green transformation across the OTS region. In this context, the *Turkic Green Finance Council* plays a key role in coordinating financial sector actors, aligning policy approaches, and accelerating the development of regional green finance markets.

Within this context, the DPI is well positioned to act as a facilitator and multiplier of drought prevention-related sustainable finance ecosystem development. While DPI's mission focuses on the facilitation of development projects, sustainable finance-related activities can support this mission by directly or indirectly improving bankability and ultimately mobilizing additional capital. In this context, potential areas for DPI action include targeted capacity building and training, policy dialogue and convening, communication and awareness raising, and applied research linked to project development.

Beyond these roles, DPI can be positioned as a “one-stop shop” for drought resilience finance in the Turkic region—not as a direct financier, but as an integrated platform covering the full value chain from project origination and structuring to de-risking and access to financing. Leveraging its links to EU instruments (e.g. Global Gateway, NDICI) and key international development partners (e.g. World Bank Group, EIB, EBRD, AIIB, FAO), DPI can aggregate fragmented opportunities into a coherent, investment-ready pipeline, reducing transaction costs and accelerating access to blended and EU finance.

To sum up, advancing green finance for drought prevention in the OTS region is both an economic necessity and a major strategic opportunity. As climate change and its detrimental impacts intensify, the cost of inaction will also continue to rise. By strengthening the alignment between finance and drought prevention as a development priority, DPI can help support long-term water security and sustainable economic growth in the region.

Building on the findings of this study, DPI is well-positioned to play a catalytic role in advancing sustainable finance for drought resilience, with a strong emphasis on cross-border and international collaboration. As a next step, a Joint Declaration could provide a common framework to align objectives, coordinate efforts, and mobilize public and private actors. In this context, the report is intended as a living framework, designed to evolve through stakeholder engagement and in line with emerging partnerships, projects, and financing opportunities.

2. Introduction: Objectives, context and rationale

2.1 Purpose and link to DPI's mission

DPI has a mission to identify and implement multilateral development projects in the OTS region. The underlying principle of DPI is that the exposure of the affected countries to the negative socio-economic effects caused by the worsening water shortage due to climate change can be mitigated.¹

Recent global estimates underline the scale of the economic challenge posed by drought and the corresponding financing needs for prevention and resilience. According to the United Nations Convention to Combat Desertification, reported global economic losses from droughts between 2000 and 2019 amounted to approximately USD 128 billion, while the actual costs are likely significantly higher and have continued to rise in recent years. The UNCCD estimates that drought-related damages currently reach around USD 307 billion per year, whereas the total cost of implementing drought-related measures identified in national plans between 2016 and 2030 is estimated at USD 210 billion (UNCCD 2024).

A significant share of both the financing needs and the resulting investment gap is concentrated in regions highly exposed to water stress, including the OTS region. Building drought resilience can be seen as an investment *per se*: beyond the multiple social and environmental co-benefits, measurable economic returns can be realized that exceed the initial investments multiple times. Global estimates suggest that nature-positive investments could generate up to USD 10.1 trillion in annual economic value and create hundreds of millions of jobs by 2030, with nature-based solutions playing a central role in drought prevention and water resilience.

That said, green or sustainable finance is key to mobilizing drought prevention investments. While many aspects of drought prevention and management fall within the mandate of governments, and state budgets can finance a considerable part of the necessary measures, private capital also needs to be mobilized to reach the needed scale of investments.

Using the terminology of the World Bank and the European Commission, in this study we understand sustainable finance as the *“process of taking due account of environmental, social and governance (ESG) considerations when making investment decisions in the financial sector, leading to increased longer-term investments into sustainable economic activities and projects”*². We use “green finance” and “sustainable finance” terms as interchangeable in the analysis, even though sustainable finance is generally understood to be the broader category, also encompassing socially sustainable finance beyond environmental aspects.

The purpose of the paper is therefore to analyze the current green finance landscape in the OTS member states with particular attention to barriers and opportunities, with a view to identifying ways forward and especially what role DPI can play to support the region's green finance ecosystem to contribute more to drought prevention.

¹ For a detailed introduction of DPI, please refer to DPI's website (www.dpiots.org/about-us/).

² World Bank Group (2021)

2.2 The link between drought prevention and green finance

Beyond its environmental dimension, drought prevention in the OTS region represents a broader development and financing challenge. This is clearly reflected in the strong interest generated by DPI's recent Expression of Interest call³, which attracted 61 project concepts across areas such as water infrastructure, sustainable agriculture, and land restoration, with a total indicative investment volume exceeding USD 320 million. While these projects demonstrate strong development rationale, their implementation typically requires financing volumes, maturities, and risk-sharing arrangements beyond the capacity of public budgets alone—underscoring the need to link DPI's mission with sustainable finance frameworks. Of these project submissions, 30 high-quality proposals met the quality evaluation threshold, with approximately 10–15 projects expected to successfully conclude the project structuring phase.

Drought prevention represents one of the most capital-intensive yet socially and economically rewarding areas of climate adaptation. Its financing needs go far beyond what can be covered by public budgets alone, especially in regions with high exposure to water stress and limited fiscal space. Mobilizing private and blended finance therefore becomes necessary to achieve the scale of investment required to build climate and water resilience. The growing global agenda on sustainable finance provides both the conceptual and practical foundations for such mobilization.

Financial systems have a critical role to play in climate adaptation and resilience. Banks, investors, and insurers can help channel resources to projects that strengthen drought resilience — from sustainable irrigation and water infrastructure to land restoration and ecosystem-based solutions. Financial institutions can also help integrate climate and water risks into credit assessment, lending policies, and investment decision-making, ensuring that financial flows are better aligned with adaptation objectives. In this sense, green finance is not merely about funding “environmentally friendly” projects, but about transforming the way risks and opportunities are perceived and priced across the financial system. This calls for a holistic approach—one that DPI should also embrace.

A range of financial instruments can directly contribute to drought prevention and water management (Table 1). For instance, green bonds and sustainability-linked loans can provide capital for water-saving technologies, wastewater recycling systems, and efficient irrigation infrastructure. Blended finance models can lower perceived risks for private investors in adaptation projects. Regional and multilateral development banks increasingly promote such mechanisms in developing, emerging, and middle-income economies, often in partnership with national Development Finance Institutions.

Table 1: Overview of key possible drought prevention sustainable finance instruments

Instrument	Description
Green loan	A loan provided for financing environmentally beneficial projects, which could include water retention, irrigation efficiency, or ecosystem restoration.
Green bond	A bond issued to raise capital exclusively for eligible green projects, typically aligned with recognized frameworks (e.g. ICMA Green Bond Principles).

³ See further details on the following link: <https://dpiots.org/calls-for-expressions-of-interest/>

Sustainability-linked loan (SLL)	A loan where financial terms (e.g. interest rate) are linked to the borrower's achievement of predefined sustainability performance targets.
Sustainability-linked bond (SLB)	Similar to SLLs, a bond instrument where coupon or repayment terms depend on the issuer's performance against sustainability targets.
Sustainability bond	A bond financing a combination of environmental and social projects, including climate adaptation and community resilience measures.
Blended finance	A structure that uses concessional public or donor capital to de-risk investments and mobilise private sector financing.
Revolving loan fund	A fund that provides loans for projects and reinvests repayments into new loans, enabling continuous financing cycles.

Source: Own edition based on UNCCD (2021)

Of course, equally important is the role of public policy and regulation in shaping the enabling environment for green and adaptation finance. Central banks and financial supervisors are increasingly integrating climate-related risks into prudential frameworks, stress-testing, and disclosure requirements. Meanwhile, green taxonomies and national sustainable finance strategies help define eligible activities and improve market transparency. For drought-related projects, the absence of clear definitions and standardized data remains a major barrier in many countries, which also underscores the need for institutional cooperation.

Ultimately, linking drought prevention and green finance means recognizing that adaptation is not only a technical or environmental challenge but also a financial one. By aligning investment flows with resilience goals, countries can simultaneously reduce vulnerability, attract new sources of capital, and create more stable foundations for long-term economic growth.

2.3 The DPI and the regional context

The OTS brings together countries with shared historical, linguistic, and cultural ties, but also with common economic and environmental challenges. Most member states are highly vulnerable to the impacts of climate change, particularly droughts, water scarcity, and land degradation. The DPI was established to facilitate multilateral cooperation among these countries, supporting the identification and implementation of joint development projects that strengthen resilience and promote sustainable growth. These efforts are increasingly framed within the broader Turkic Green Vision, which sets out long-term priorities for environmental sustainability, green growth, and climate resilience across the OTS. Within this strategic framework, sustainable finance—and in particular financing for drought resilience—emerges as a key enabling pillar.

The OTS region encompasses diverse geographies and economic structures — from the energy-rich economies of Kazakhstan and Azerbaijan, to the large and diversified economy of Türkiye, and to the agrarian systems of Uzbekistan and Kyrgyzstan. Despite these differences, all face similar pressures: declining water availability, aging infrastructure, and the need to continuously modernize agricultural practices. Addressing these challenges requires coordinated action that combines technical expertise,

policy coherence, and financial innovation. Based on its 2025-2026 strategic roadmap, the DPI aims to serve as a regional hub for project facilitation and delivery supported by knowledge exchange in this regard.

Hungary, as an observer state in the OTS and host country of the DPI, can provide an important bridge between the European Union and the Turkic region. Drawing on the EU's experience in sustainable finance frameworks, such as the EU Taxonomy, climate and environmental risk integration in the banking prudential frameworks, and ESG disclosure requirements, Hungary and the DPI can help adapt these concepts to local contexts, while ensuring that solutions remain pragmatic and region-specific. This bridging function is particularly valuable for aligning OTS members' green finance initiatives with international standards, thereby enhancing access to global capital markets.

The scope of this study covers the five OTS member states, namely Azerbaijan, Kazakhstan, Kyrgyzstan, Türkiye, and Uzbekistan. Together, these countries represent a population of over 180 million people, sharing significant natural resources, but also vulnerabilities to climate change and especially water stress. As discussed below in this study, their sustainable finance ecosystems are at varying stages of development—some countries have already launched national green finance frameworks or taxonomies, while others are at earlier stages of market formation.

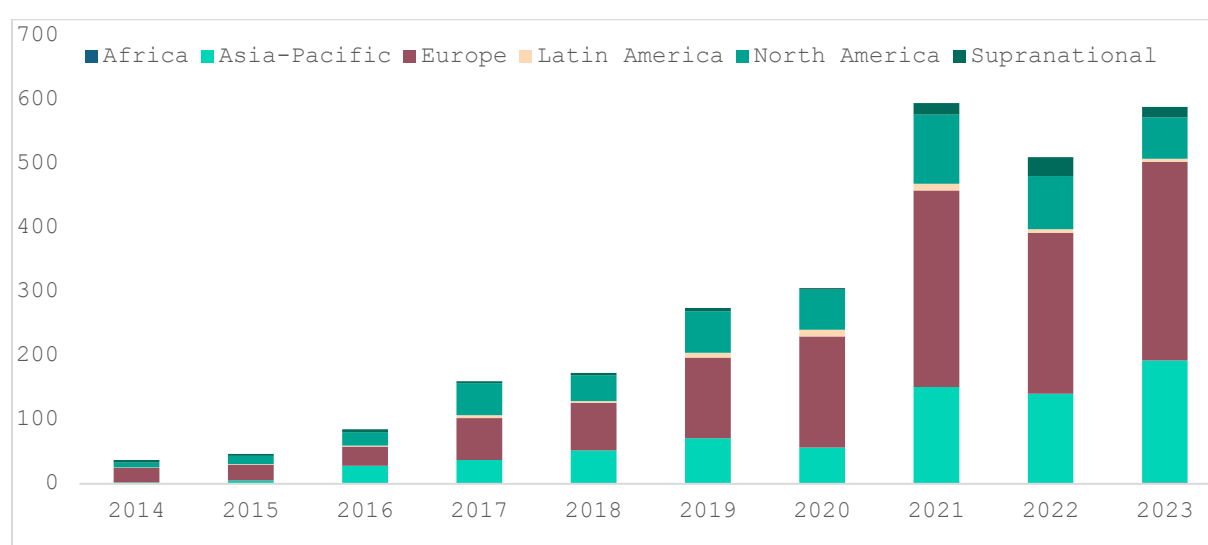
The DPI's role within this landscape is to help identify synergies, strengthen institutional capacities, and promote coordinated approaches to financing drought resilience. By facilitating dialogue between governments, financial institutions, and development partners, the DPI can serve as a catalyst for building a more integrated and effective green finance ecosystem across the OTS region, with a strong focus on drought prevention and drought management.

3. Green finance landscape in the OTS region

3.1 Global and regional context

Over the past decade, sustainable finance has evolved from a niche segment into a central component of global financial systems. Driven by climate change, biodiversity loss, and increasing environmental risks, policymakers and market actors are progressively integrating environmental, social, and governance (ESG) considerations into financial decision-making. This shift is reflected in the rapid growth of green bonds, sustainability-linked loans, and ESG-aligned investment strategies, as well as in the development of regulatory frameworks such as green taxonomies and climate-related disclosure standards.

Chart 1: Development of the green & sustainable bond market over time



Source: Climate Bonds Initiative

At the global level, a number of international initiatives have played a key role in shaping this agenda. The Network for Greening the Financial System (NGFS) has become a central platform for central banks and supervisors to address climate-related financial risks. Similarly, initiatives such as the United Nations Environment Programme Finance Initiative (UNEP FI), and the Climate Bonds Initiative (CBI) have contributed to the development of market standards and investor commitments. Multilateral organizations, including the World Bank Group, the European Investment Bank, the European Bank for Reconstruction and Development and the OECD, have also supported countries in designing sustainable finance frameworks and mobilizing capital for climate-related investments.

While much of the early focus of sustainable finance has been on climate mitigation, particularly renewable energy and energy efficiency, there is a growing recognition of the importance of climate adaptation, including water management and drought resilience. However, adaptation finance remains significantly underdeveloped compared to mitigation, both globally and in emerging markets. Challenges such as the lack of standardized definitions, limited data availability, and difficulties in measuring financial returns continue to constrain the scaling up of investment in adaptation-related sectors.

In this context, the OTS region reflects many of these global dynamics, while also facing specific structural and geographic challenges related to water scarcity and climate exposure. The countries of the region are increasingly engaging with international sustainable finance initiatives and adapting global frameworks to their national contexts. At the same time, the need to mobilize financing for drought prevention and water resilience provides a strong rationale for further aligning sustainable finance developments with regional priorities.

Table 2: An overview of selected sustainable finance features of the OTS member states

	NGFS membership	Sustainable Finance Taxonomy	Key Frameworks / Roadmaps	Sovereign green or sustainability bond issued
<i>Azerbaijan</i>	Application planned	Yes	Sustainable Finance Roadmap (2023–2026); ESG and green lending guidelines	Planned
<i>Kazakhstan</i>	ARDFM Kazakhstan and National Bank of Kazakhstan are members	Yes	ESG implementation roadmap; ESG awareness roadmap; ESG disclosure guidance; environmental and social risk management guidelines	Planned
<i>Kyrgyzstan</i>	No membership as of end 2025	Yes	Sustainable Finance Roadmap (2024); Green Economy Development Programme (2025–2029)	No information found
<i>Türkiye</i>	Central Bank of the Republic of Türkiye and Banking Regulation and Supervision Agency of Türkiye are members	Draft	Sustainable Banking Strategic Plan (2022–2025); Sustainable Finance Framework	Yes
<i>Uzbekistan</i>	Central Bank of Uzbekistan is a member	Draft	Strategy for the Transition to a Green Economy (2019–2030)	Yes

Source: Desktop research, source documents listed in “References” chapter

3.2 Policy landscape in the OTS region

Across the OTS region, sustainable finance policy frameworks have developed significantly in recent years, reflecting a growing recognition that financial systems have a critical role to play in supporting environmental sustainability, climate change adaptation and mitigation efforts. While the level of development varies across countries, there is a clear regional trend toward establishing policy foundations that can guide financial flows toward sustainable economic activities.

At the regional level, these developments are increasingly aligned with the objectives of the Turkic Green Vision, which provides a shared reference framework for sustainability and climate-related policy development. In parallel, the recently established Turkic Green Finance Council offers a platform

to support coordination among financial sector stakeholders and to help translate strategic objectives into more aligned policy approaches and market practices. Strengthening the operational link between such strategic initiatives and financial sector reforms remains an important next step for the region.

A central element of these efforts is the introduction of green taxonomies, which provide classification systems to define environmentally sustainable activities and support the development of green financial instruments. Several countries in the region have already adopted or are in the process of developing such frameworks. Kazakhstan has embedded its taxonomy within its Environmental Code, linking it directly to financial instruments such as green bonds and loans. Uzbekistan has introduced a national taxonomy with experimental application already underway, while Azerbaijan approved its Green Taxonomy in 2025 with detailed technical screening criteria. In Türkiye, a taxonomy aligned with the structure of the EU Taxonomy is currently under development, and Kyrgyzstan has also introduced a taxonomy framework, currently operating in a pilot phase.

Importantly, these taxonomies provide a common language for project developers, financiers and regulators by defining sustainable economic activities. As such, these frameworks can serve as the foundations also for DPI's drought prevention-related mission to create a bankable project pipeline, even if water scarcity and water management are in most cases less prominent in the region's taxonomies at the moment.

In addition to taxonomies, countries across the region have adopted broader strategies and roadmaps aimed at integrating sustainability considerations into financial systems. As Table 2 outlines, key policies, which include national sustainable finance roadmaps, green economy strategies, and sector-specific action plans have been developed in recent years. Such frameworks typically address areas such as ESG integration, development of financial instruments, disclosure practices, and capacity building. In several cases, these policy initiatives are supported by international partners, including multilateral development banks and international organizations, which provide technical assistance and contribute to alignment with global standards.

At the same time, many of these frameworks are relatively recent, and their practical implementation is still evolving. In particular, the treatment of climate adaptation and drought-related investments within policy frameworks remains less developed compared to mitigation-focused areas such as renewable energy. This suggests that, while an enabling policy environment is increasingly taking shape, further work is needed to translate high-level frameworks into operational tools and clearly defined investment categories relevant for water and land management.

3.3 Institutional setup and regulatory drivers

Linked to policies, it is also important to understand the respective institutional setups around sustainable finance. Institutional responsibility in the OTS region is primarily concentrated within central banks, Ministries of Finance and/or Environment, financial supervisors, and, in some cases, capital market authorities. Across countries, these institutions are increasingly expanding their mandates to incorporate climate-related risks and sustainability considerations into financial sector policies and practices.

A common feature across several OTS member states is the active involvement of central banks in setting the strategic direction for sustainable finance, including the development of roadmaps, guidelines, and principles related to ESG integration, environmental risk management, and sustainable

lending practices. In parallel, authorities are introducing disclosure requirements and supervisory expectations aimed at improving transparency and strengthening the management of climate-related financial risks.

Engagement with international initiatives also plays an important role in shaping institutional approaches. Several central banks and regulators in the region are members of the Network for Greening the Financial System (NGFS), providing access to international experience and facilitating the exchange of best practices. Other countries are in the process of strengthening their engagement with such networks, reflecting a broader trend toward international alignment.

In some of the OTS member states, additional institutional actors contribute to the development of sustainable finance ecosystems. For example, specialized platforms such as the Astana International Financial Centre (AIFC) and its Green Finance Centre support market development through advisory services, capacity building, and the facilitation of green financial instruments. In the Kyrgyz Republic, the Center for Climate Finance plays a complementary role by combining project support, training, and analytical functions aimed at mobilizing climate-related investments.

Despite these developments, institutional capacities and levels of coordination differ across the region. In many cases, sustainable finance remains a relatively new policy area, requiring further development of technical expertise, data systems, and inter-institutional cooperation mechanisms. This highlights the importance of continued capacity building and structured knowledge exchange at the regional level.

3.4 Status of the green finance market

Green finance markets across the OTS region are at different stages of development, but overall show a trajectory of gradual expansion. While some countries have already introduced a range of labelled financial instruments, in others market activity remains limited and is still in an early phase.

Green and sustainable bond issuance has emerged as one of the most visible segments of the market. Türkiye has issued a sovereign green bond and has seen multiple corporate issuances over recent years. Uzbekistan has also entered the market with sovereign thematic bonds, including SDG bonds and green Eurobonds, attracting investor interest. In Azerbaijan, preparations are ongoing for the issuance of sovereign green bonds. At the same time, domestic capital market infrastructure—such as stock exchanges offering green bond listings—has begun to play a role in facilitating issuance in some countries.

Kazakhstan has developed a relatively broad set of green and ESG-labelled financial instruments, including both bonds and loans. Issuances have financed a range of sectors, including renewable energy, energy efficiency, and, to a more limited extent, sustainable water use and agriculture. In parallel, green and sustainability-linked lending is gradually emerging across several banking systems, supported by newly introduced guidelines and regulatory initiatives. However, the scale of such activities remains modest in the region, and product development is still evolving. Across the region, financial flows have so far been concentrated predominantly in mitigation-related sectors, while adaptation finance—and in particular drought-related investments—remains underrepresented.

Several structural challenges continue to affect market development. These include limited availability of bankable project pipelines, data constraints related to environmental performance and risk assessment, and capacity gaps within financial institutions. At the same time, increasing policy support,

growing awareness, and the involvement of international financial institutions are creating conditions for further expansion. Overall, the region's green finance markets can be characterized as emerging but developing, with significant potential for scaling up—particularly in areas related to climate adaptation, water management, and drought resilience, i.e. in the core area of DPI's mission.

The analysis above highlights that, while the OTS region has made important progress in establishing policy frameworks, institutional structures, and initial market activity in sustainable finance, significant gaps remain—particularly in translating these foundations into scaled investment flows for climate adaptation and drought resilience. At the same time, common patterns across countries, including emerging taxonomies, increasing regulatory engagement, and growing but still limited market depth, point to a set of shared opportunities. Building on these observations, the following chapter identifies key areas where targeted interventions could accelerate the development of green finance and better align financial systems with drought prevention objectives across the region.

4. Opportunities for advancing green finance for drought resilience in the OTS region

4.1 Analysis framework

Based on the regional overview outlined in the previous chapter, and in order to analyze the opportunities for advancing green (and in particular, drought prevention) finance in the OTS region, we apply a standard SWOT analysis. This allows for a thorough identification of strengths and weaknesses of the region's green finance ecosystem, and also external opportunities and threats that influence the future development. The SWOT analysis is highly suitable for our study, because of the heterogeneity of OTS members and the strong role of public institutions in shaping sustainable finance.

Strengths

One key strength in the OTS region is the growing policy momentum on sustainable and green finance. Several countries have adopted or are developing national sustainable finance strategies, green (sustainability) taxonomies, and/or ESG supervisory frameworks. In many cases, central banks and financial regulators are actively engaged, issuing guidance on environmental (primarily climate) risk management, sustainable finance guidelines, often focusing on green lending and bonds.

Another important strength is the emergence of sovereign green bonds (and, in some countries sustainability bonds), particularly in the more advanced markets. Beyond attracting funding, these instruments raise awareness, build credibility and also create "reference points" for domestic issuers. Moreover, the region benefits from strong engagement by international financial institutions, which provide technical assistance, financing, and market-building support.

Weaknesses

Despite all the developments and progress mentioned above, green finance markets in the OTS region often remain relatively shallow and unevenly developed. Many of the existing frameworks, including the taxonomies and the supervisory guidelines, are very recent and remain largely untested in practice. Market activity is often concentrated, the range of actors is narrow and the financed activities are also limited to more straightforward projects, such as renewable energy, while the more complex uses-of-proceeds, such as drought prevention, water management, and adaptation projects, remain rare.

Capacity limitations also represent a significant weakness. Many financiers might lack the technical expertise to assess and especially model longer term climate- and even more so, water-related risks or to develop and to roll out dedicated green and sustainability-linked financial products. Similar gaps may exist among many insurance firms. Limited data availability, insufficient actuarial experience can also be a constraint, although we only have anecdotal information about these weaknesses due to the lack of comprehensive market surveys.

Opportunities

The region has significant opportunities to scale green finance, including using green finance to support drought prevention and climate change adaptation. Climate risks and water stress are increasing, but these can create a strong economic and policy rationale for extending investments into drought resilience. There is a clear potential to broaden the range of financial instruments, including

adaptation-focused green bonds, along with potentially sustainability-linked loans with water-related KPIs. Blended finance and insurance solutions also offer more opportunities than are currently being realized.

Notably, regional cooperation offers an additional opportunity. Many of the OTS members face somewhat or very similar challenges, and therefore they could benefit from joint knowledge building, trainings, peer learning, well-coordinated regional programs. Such cooperation is also “dictated” by water systems and climate impacts crossing national borders. Institutions such as the DPI is well positioned to act as a catalytic platform in facilitating such cooperation and aligning regional efforts with international standards. At the same time, DPI can complement the work of the Turkic Green Finance Council by translating regional coordination efforts into concrete financing opportunities for drought resilience, notably through project pipeline development, facilitation, and applied knowledge sharing.

DPI’s unique features also offer opportunities. It can credibly be positioned as a “one-stop shop” for drought resilience finance in the Turkic region. Even though it does not provide financing itself, it can integrate the full value chain: project origination, structuring, de-risking, and connection to financing sources. Furthermore, DPI’s embedded links to EU frameworks, alongside the World Bank Group, IFC advisory services, FAO, AIIB, and the Turkic Investment Fund, allows it to aggregate different opportunities into a coherent, investment-ready pipeline. In this sense, DPI could function as a gateway platform aligning regional priorities with multiple international financing streams, reducing transaction costs and accelerating access to EU and blended finance.

Threats

Several external factors pose risks to the development of green finance markets. International macroeconomic uncertainty, limited and expensive long-term funding, can reduce the availability of capital. Data gaps on climate and water risks may hamper the provision of green financial products and increase financial risks.

Table 3: SWOT analysis of sustainable finance markets of the OTS member states

Strengths	Weaknesses
▪ Growing policy momentum across the region (taxonomies, strategies, ESG frameworks) ▪ Active role of central banks and financial regulators in issuing guidance and frameworks ▪ Emergence of sovereign green and sustainability bond issuances ▪ Increasing engagement of international financial institutions (technical assistance, funding) ▪ Development of regulatory foundations for green lending and risk management ▪ Growing awareness of sustainable finance across public and private sectors	▪ Green finance markets remain shallow and unevenly developed ▪ Many frameworks (taxonomies, guidelines) are recent and not yet fully tested in practice ▪ Market activity is concentrated (limited actors and sectors) ▪ Limited financing for adaptation, water management, and drought-related projects ▪ Capacity gaps among financial institutions (risk assessment, product development) ▪ Data gaps and limited actuarial experience, especially for climate and water risks

Opportunities	Threats
▪ Scaling green finance to support drought prevention and climate adaptation ▪ Expanding financial instruments (adaptation-focused bonds, sustainability-linked loans with water KPIs) ▪ Development of blended finance and insurance solutions ▪ Strengthening regional cooperation and peer learning across OTS member states ▪ Aligning financial flows with increasing climate and water stress realities ▪ Mobilizing private sector capital through improved project pipelines and policy signaling ▪ DPI as a one-stop-shop ▪ DPI's strong international connections to OTS member states, EU and global initiatives and organizations	▪ Global macroeconomic uncertainty affecting capital availability ▪ Limited availability of long-term and affordable financing ▪ Data gaps increasing perceived risks and limiting product development ▪ Lack of methodology development for adaptation finance ▪ Continued concentration of investments in mitigation rather than adaptation

4.2 The potential strategic role of DPI

Within this landscape, DPI is well positioned to play a strategic, value-adding role that complements—rather than duplicates—the activities of national authorities, regional initiatives, and international financial institutions.

First, DPI can act as a regional connector, leveraging also the DPI's position in Hungary within the European Union and thus its familiarity with EU sustainable finance frameworks. This could enable DPI to translate international sustainable finance standards and practices into the OTS context in a pragmatic and authentic way.

Second, DPI can also help connect investors, multilateral development banks, and project developers with each other, facilitating dialogue and even matchmaking around drought-relevant investment opportunities. DPI's call for project concepts, published in July 2025 is a first practical example of such a role.⁴

Third, DPI can serve as a knowledge and coordination hub, bringing together regulators, financial institutions, researchers, technical experts and other key players. In doing so, DPI's activities could be closely aligned with the Turkic Green Vision, while interaction with the Turkic Green Finance Council could enhance coherence between project development, financial sector reforms, and regional policy dialogue. Through convening stakeholders across countries and sectors, DPI can foster a shared understanding, support capacity development, and potentially also the co-creation of solutions. This includes cooperation with institutions such as the EBRD, EIB, the World Bank Group, AIIB and other development partners active in the region.

Finally, DPI can contribute through facilitating applied research and analytical work (using its network and outreach), focusing on practical questions such as how drought risks affect financial performance,

⁴ See further details on the following link: <https://dpiots.org/calls-for-expressions-of-interest/>

how adaptation investments can be structured to attract private capital, and how taxonomies and disclosure frameworks can better incorporate water and drought-related activities and/or elements. This way, DPI can help address critical knowledge gaps while establishing its role as a credible regional platform for green finance and drought prevention. We further explore these possible roles in the next chapter.

5. Potential areas for DPI action

As already stated before, the DPI's strategic roadmap aims at empowering OTS members dealing with sustainable agriculture and rural development to effectively enhance their efforts in fighting drought. Therefore, the potential areas for action outlined below should be understood as enablers and facilitators of this project-oriented mission. The suggested elements, such as knowledge building, policy dialogue, communication, and analytical work, are not ends in themselves, but instruments to expand financing readiness of drought-prevention investments.

Building on the opportunities identified in the previous parts, this section describes potential areas where the DPI could add concrete value in advancing green finance (with a focus on drought prevention) across the OTS region. The proposed actions are deliberately modular, allowing DPI to start possibly with smaller pilot initiatives and gradually expand its role based on actual demand, partnerships, and available resources.

5.1 Knowledge and capacity building

A core area of potential DPI action lies in knowledge sharing and capacity building, addressing one of the most frequently arising barriers across the region. While awareness of sustainable finance concepts is increasing, many institutions still lack practical experience in translating these concepts into concrete financial decisions and instruments, particularly in relation to drought prevention and adaptation.

From a DPI perspective, capacity building is especially relevant since it improves the quality, financing structure, and bankability of drought-prevention projects. Strengthening the skills of financial institutions and public authorities can directly support DPI's ability to help move projects from concepts to implementation, and to even match them with available financing instruments.

DPI could facilitate and coordinate targeted training programs tailored to the needs of different stakeholder groups. For central banks and financial supervisors, training could focus on climate- and water-related financial risks, supervisory expectations, and the integration of drought risks into prudential frameworks. For commercial banks, programs could address product development (primarily green loans), risk assessments, and portfolio-level integration of water and climate considerations. Additional modules could target other stakeholders, including potential corporate green bond issuers, as well as ministries of finance, with a focus on sovereign green bond frameworks and reporting practices. Over time, these activities could evolve into a more structured "DPI Academy" on green finance and drought resilience, serving as a regional platform for capacity building and applied learning.

These efforts could be strengthened through cooperation with existing international platforms, such as sustainable finance academies linked to global initiatives. This would ensure alignment with international best practices but keep a regional "flavor". Beyond formal training, DPI could also facilitate exchange initiatives that promote peer learning and forms of informal knowledge sharing. This could include periodic or ad hoc in-person conferences, online roundtables and other knowledge sharing formats. A regular peer learning format could be the establishment of a community of practice connecting financial institutions. Such formats could be expanded to include policymakers and/or experts across the OTS region. These formats can help spread practical experience and accelerate learning without requiring large institutional expenses.

Thematic focus areas for these activities could include:

- climate risk management for banks;
- sovereign green bonds;
- financing nature-based water solutions;
- integrating water efficiency into financial strategies;
- drought-prevention financial instruments; and
- treatment of drought-related activities within green taxonomies and other relevant areas.

5.2 Policy dialogue and convening role

A second potential key role for DPI is acting as a convening platform for policy dialogue on sustainable finance. Many OTS member states are simultaneously developing taxonomies, climate risk disclosure requirements and supervisory practices and likely facing similar challenges. DPI is well placed to support a structured regional dialogue without replacing national decision-making processes in any way. Such a policy dialogue can also contribute to DPI's mission by creating more enabling and supportive conditions for the development and financing of regional drought-prevention projects, including projects with potential cross-border relevance. In particular, DPI could for example organize roundtables and regional forums bringing together relevant stakeholders, including central banks, ministries of finance, environment, energy and water, financial regulators, and selected market participants. Over time, such efforts could be further institutionalized through cooperation with the Turkic Green Finance Council, which serves as a structured and recurring forum for dialogue among financial sector stakeholders across the OTS region.

These forums could serve as spaces to informally discuss policy design ideas, implementation challenges, and emerging international developments and experience. Dialogue among the above stakeholders could focus on climate risk integration, data challenges, and supervisory approaches related to drought and water stress. Policy dialogue topics could include the design and use of green taxonomies, regulatory issues around adaptation and drought-related activities, alignment with international standards, and the interaction between public policy objectives and market development. Over time, such a dialogue could support gradual convergence and a joint understanding across the region about key issues.

5.3 Communication and awareness

Effective communication is essential for building momentum around green finance and drought prevention. DPI could play an active role in raising awareness among policymakers, financial institutions, as well as local and international investors. From a project perspective, communication and awareness-raising can play a very helpful and practical role in building investor confidence, attract interest to projects, thus supporting the mobilization of financing. Outreach activities could include short analytical articles, infographics, and brief explanatory videos highlighting key concepts, trends, and success stories. Visibility actions could focus on good practices and case studies from the OTS region and beyond, helping demonstrate that drought-related investments are “doable” and financially relevant.

Such communication efforts would not only support DPI's strategic objectives, but also strengthen its external positioning as a credible regional actor in sustainable finance, particularly in the area of financing for drought resilience.

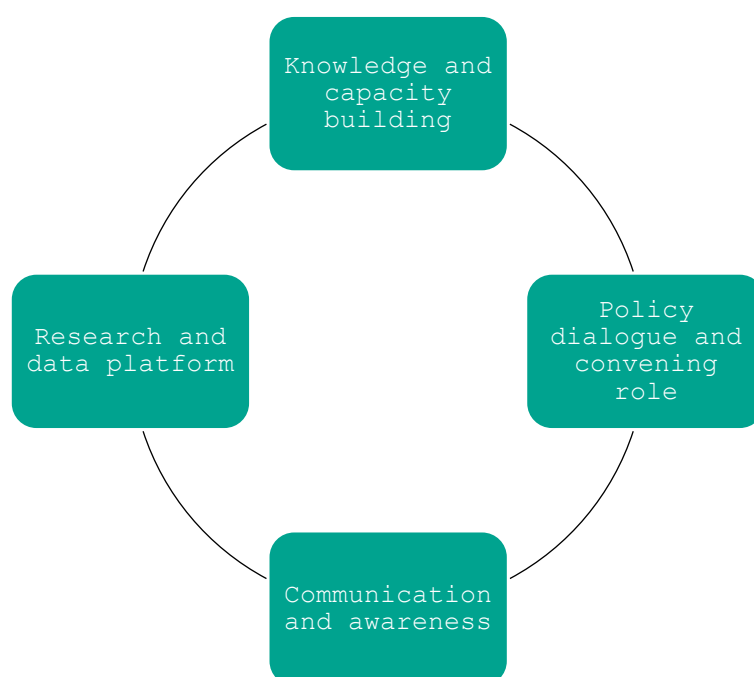
5.4 Potential additional longer term functions: Research and data platform

Over time, DPI could gradually develop a dedicated research and data platform to support evidence-based decision-making. Further applied studies could focus on topics including the impact of drought risk on financial performance, comparative analysis of financial instruments for adaptation, and in-depth case studies of successful projects, ideally increasingly coming from a pipeline of DPI projects following calls for proposals.

Importantly, such research and data activities should by no means be purely academic and theoretical, but closely linked to DPI’s portfolio and to actual or potential projects, helping improve project planning, risk assessments, impact measurement for future drought prevention investments.

Given persistent data gaps in the region, DPI could also explore the creation of a data repository, collecting and making available proxies and publicly available indicators where granular data are not yet available. Over time, this could evolve into some sort of a modest green finance observatory, tracking market developments, policy initiatives, and emerging trends related to drought and sustainable finance in the OTS region.

Chart 2: Overview of potential DPI activity areas



All in all, these potential areas of action show how sustainable finance-related activities can serve as facilitators of DPI’s development mandate, strengthening and building the pipeline and the financing of drought prevention projects in the OTS region. Together, these elements form a complementary architecture in which strategic direction (the Turkic Green Vision together with the DPI strategic roadmap), policy and financial sector coordination (Turkic Green Finance Council), and project-level facilitation in drought resilience (DPI) reinforce each other.

6. Epilogue and way forward

This study has highlighted both the growing relevance of green finance for drought prevention in the OTS region and the gaps that currently limit its effectiveness. Looking ahead, DPI is well positioned to play a supportive and catalytic role in strengthening the region's green finance ecosystem, particularly where it intersects with drought resilience. While DPI is neither a regulator nor a financing institution, its comparative advantage lies in bridging the gap between green finance and drought resilience investments—through knowledge dissemination, coordination, and project facilitation.

By translating international experience into regionally relevant insights, convening stakeholders across countries and sectors, and supporting the development of practical tools and project pipelines, DPI could help accelerate the integration of drought prevention objectives into financial decision-making.

Regional cooperation will be particularly important where shared geographies and water systems (e.g. rivers, lakes and other relevant areas) call for joint action. Many drought-related challenges go beyond national borders, making coordinated approaches more effective than country-level interventions. DPI can therefore provide a neutral technical platform for such cooperation, fostering dialogue among public authorities, financial institutions, development partners, and knowledge providers. In doing so, it can help align national initiatives with regional priorities and international standards, while taking into account country-specific contexts and capacities.

Looking forward, several emerging trends and possible future directions warrant continued attention. As sustainable finance frameworks mature, greater emphasis will be needed on performance measurement and impact assessment, including how financial instruments have contributed to actual resilience outcomes on the ground, in practice. Future research could focus on evaluating the effectiveness of drought prevention investments, developing indicators that link financial flows to water and climate outcomes, and creating feedback loops that inform the design of more refined and targeted future projects. Such analytical work would strengthen the evidence base for both policymakers and investors.

The importance of advancing drought resilience finance in the OTS region cannot be overstated. Climatic trends are expected to worsen, simultaneously increasing pressure on water resources, ecosystems, and economic systems. Meeting these challenges will require much higher levels of investment, supported by well-functioning green finance markets and robust institutional frameworks. By contributing to knowledge, coordination, and practical implementation, DPI can play an important role in advancing long-term water security and sustainable financial market development across the region. These efforts would be further reinforced by alignment with the *Turkic Green Vision* and the *Turkic Green Finance Council*, which together could provide both strategic direction and institutional coordination for scaling financing for drought resilience across the OTS region.

Building on the findings of this study, DPI is well placed to take on a catalytic role in advancing sustainable finance for drought resilience, with a strong emphasis on fostering collaboration across OTS member states and with international stakeholders. As a concrete next step, the development of a Joint Declaration could serve as a unifying framework to formalize shared objectives, coordinate efforts, and mobilize both public and private actors around a common agenda. In this context, this report should be seen as a living framework, evolving through continued stakeholder engagement and in line with emerging partnerships, projects, and financing opportunities.

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