

A stylized graphic of a globe showing the continents of Africa and Europe in yellow, with white outlines, set against a white background within a circular frame.

EPIS REPORT ON CLIMATE POLICY & ENVIRONMENT

Water as an Instrument of War

Should the environment be used as an instrument of war? The environment is a silent victim in conflict that is beaten and abused with long-term consequences, acting as a threat multiplier for the effects of the climate crisis. The destruction of dams is a common theme in the Russia-Ukraine conflict. International Criminal Law is ineffective at protecting the environment in conflict, perhaps stronger solutions should be in place, should the environment have their own rights in conflict?

Resilient Roots: EU Tech Grants for Farmers

How can the EU accelerate climate tool adoption for smallholders in Africa and SE Asia without increasing financial risk? Loan-based models create debt burdens during crop failures; thus, a grant-based instrument within the NDICI-Global Europe framework is essential to fund both technology and long-term support. These grants serve as a preventive stabilization tool, reducing global insecurity by protecting 260,000 farmers' livelihoods.

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EPIS Report on Climate Policy & Environment

Dear reader,

Given the growing presence of international conflicts and militarization, climate change and environmental issues have stepped back in security-related discussions, especially in Europe.

This is why the third issue of Climate Policy & Environment is dedicated to climate and sustainability discussions within the European Union and its role in dealing with the related challenges. The report also addresses water-related conflicts by delving into the case studies of Russia-Ukraine war and Türkiye.

Where does the EU stand in terms of climate change adaptation and regulation? What other instruments remain unused? How does water get weaponized in war? And how does Türkiye's Southeastern Anatolia Project (GAP) transform upstream water control into geoeconomic leverage over Syria and Iraq? These questions will be pursued in the following.

Thoughts on power, policy and progress are what awaits you in this report. We would like to invite you to consider these articles as a tool to expand your point of view regarding climate change and to simultaneously practice your criticism.

Have fun reading!

Alisa Grunert
EPIS Resort Leader
Thematic Report Groups

About the Article

Should the environment be used as an instrument of war? The environment is a silent victim in conflict that is beaten and abused with long-term consequences, acting as a threat multiplier for the effects of the climate crisis. The destruction of dams is a common theme in the Russia-Ukraine conflict. International Criminal Law is ineffective at protecting the environment in conflict, perhaps stronger solutions should be in place, should the environment have their own rights in conflict?

About the Author

Kate Whitelock is a graduate of Northeastern University London with an MSc in Digital Politics and Sustainable Development. Her dissertation explored environmental policy, with a particular focus on how neoliberalism has become intertwined with environmentalism. During her time at Northeastern, she worked as a research assistant. Prior to this, Kate earned a BA (Hons) in Philosophy from the University of Sussex. Kate is passionate about shaping environmental policy and aspires to work for a think tank or within government to advance sustainable solutions.

1. Introduction

Water is a finite resource, due to the world's growing population and anthropogenic climatic change which means that the demand for water is growing, whilst at the same time being unevenly distributed. Water scarcity hits the developing world, particularly women and girls, the hardest as, for many, it means more laborious time-consuming water collection. According to the World Health Organization (2025), one in four lack access to clean drinking water. So, Goal 6 of the Sustainable Development Goals (SDGs) 'ensure availability and sustainable management of water and sanitation for all' (United Nations, 2025) in 2030 is becoming ever more out of reach.

When we bring in weaponization of water into the conversation on water scarcity, this increases the disparity, even further, of access to water and sanitation for all. To weaponize water, in war, means to use it as a strategic instrument as 'a means of gaining advantage or defending oneself in a conflict or contest [...] an item, action, offensive capability, or mechanism used or intended to kill, injure, or coerce' (King, 2016, p.155). In a study assessing the problem of weaponizing water in war in Africa and the Middle East, Marcus King developed a six-category matrix of how water is used as an instrument. (King, 2023, p.2).

Strategic Weaponization	Tactical Weaponization	Coercive Weaponization	Unintentional Weaponization	Instrument of Psychological Terror	Instrument of Extortion or Incentivization
The use of water to destroy large or important areas, targets, populations, or infrastructure	The use of water against targets of strictly military value within the battlespace	The use of water provision to fund territorial administration or weapons acquisition with aspirations of achieving legitimacy	Attempted water weaponization causes collateral damage to the environment or its human component	The use of the threat of denial of access or purposeful contamination of the water supply to create fear among non-combatants	The use of water provision to reward the behavior of subject populations and support legitimacy of the perpetrator

Water weaponization is nothing new to conflict and co-operation, 'in ancient Mesopotamia, a conflict over the Euphrates River between two Sumerian cities yielded the world's first recorded treaty' (Daoudy, 2020, p1349). In the Russia-Ukraine conflict, water has been a central

instrument used by both sides primarily used tactically and strategically, however, instances of water weaponization never pertains to just one category within the matrix.

2. Destruction of the Nova Kakhovka Dam - Who Is to Blame ?

Whilst water weaponization is nothing new in war, contemporary conflict has seen an increase of attacks on water infrastructure as it becomes a sparse resource. During the Russia-Ukraine conflict, one of the most significant incidents to water infrastructure was the destruction of the Nova Kakhovka Dam on the Dnipro river in 2023 caused by an explosion forcing it to collapse, which affected the Kherson region and the Crimean peninsula. The critical infrastructure that was destroyed was labelled as 'ecocide' by President Volodymyr Zelensky (Dannenbaum, 2023) due to the ecological and humanitarian disaster it caused. Ukraine declared a state of emergency in Nova Kakhovka, a post-soviet area. Nova Kakhovka Dam was under Russian military control, however, supplied water to the irrigation system of Southern Ukraine as well as cooling the Zaporizhzhia nuclear power plant, the largest power plant in Europe.

Both Ukraine and Russia placed blame for this destruction on each other, President Zelensky condemning 'Russian terrorists' (Financieras, 2023, p.1) and Russia claimed that Ukraine sabotaged the dam themselves. However, evidence clearly suggests that the dam was destroyed by those that controlled it - Russia. Moreover, in late 2022 Russia began to deliberately drain the Kakhovka reservoir likely to hinder Ukraine's agricultural production. Ukraine is categorized as 'the breadbasket of Europe' (FOA, 2022) due to certain areas in Ukraine being covered by the most fertile soils, globally. This points the blame towards Russia strategically targeting the dam to destroy the irrigation system the agricultural land relied upon for crop production as well as to create floods that further destroy ecosystem services and to demolish multiple vil-

lages. The floods downstream subsequently causes towns to be more 'at risk for water-borne diseases due to poor sanitation' (King, 2023, p.2) The destruction of the Nova Kakhovka dam has significantly increased food and water insecurity in Ukraine, forcing Ukraine to be more reliant on the global food market.



2.1. Weaponization of water in the Russia-Ukraine conflict

According to Kitowski (2023) the opportunity for weaponization of water in the Russia-Ukraine conflict dates back to the collapse of the Union of Soviet Socialist Republics (USSR). The fifteen post-soviet states are sites of hostility but also have 'a very strong environmental dimension, during which water resources are an object of rivalry' (Kitowski, 2023, p.336). Conflicts regarding water resources go back to the Soviet Union era as 'these decisions very often resulted from the doctrine of large-scale change and industrialization of nature introduced by Joseph Stalin' (Kitowski, 2023, p.336). The socio-political background is important to understand why water is weaponized as heavily as it is in the Russia-Ukraine conflict.

Whilst Russia are the biggest culprits for water weaponization, Ukraine has engaged similar approaches using water as a weapon. In 2022, Ukraine was desperate to stop Russian progress to Kyiv, in their invasion, so to disrupt the military advancement, 'Ukraine intentionally released water into the Demydiv region, causing massive damage to residential and agricultural land by blowing up the dam on the Irpin River' (King, 2023, p.5). This use of water as a weapon did hinder Russian troops in Kyiv forcing them to use different terrain and narrower pa-

thways, giving Ukraine time to prepare. Another example of Ukraine using water as a weapon was also in 2022 when Ukraine blew up a dam on the Mironovsky reservoir, south of Popasna to block another advancement from Russian troops in Popasna. Whilst in both of these examples, Ukraine is weaponizing water, it was used tactically as a defensive strategy rather than an attacking one and so the use of water as a weapon is certainly not level between the two states.

The destruction Russia has caused by weaponising water, has nearly triggered large-scale hydrological disasters. In 2022, Russian forces used missiles to attack 'the hydroelectric dam forming Karachunovsky Reservoir on the Inhulets River (tributary of the Dnieper) near Krivoyw Rog' (Kitowski, 2023, p.340). The strike's aim was to block the foothold Ukrainian troops had by destroying crossings. This attack was also 'carried out on the birthday of Volodymyr Zelensky, President of Ukraine in the town he came from' (Kitowski, 2023, p.340), only increasing tensions militarily and politically. Russia's attacks on water infrastructure increased the spread of COVID-19, as it forced citizens to live in unsanitary conditions. This certainly could have been prevented.

3. The silent casualty of any war - the environment

The flooding and destruction of dams, such as the Nova Kakhovka Dam will have long-lasting effects on the environment 'with chemical and pyrotechnic pollution from fuel oil tanks, mines, and unexploded ordnance washing away, leaving a lasting impact for decades to come' (Szpak, 2024, p76.) . Not only this, but the destruction of the dam acts as a threat multiplier for water insecurity that has been exacerbated by climate change. Whilst it can be argued that the destruction of the Kakhovka Dam violates the International Humanitarian Law due to the severe losses among the civilian population - shouldn't the destruction of a dam be protected not just for severe losses among civilians but also purely for the environment's sake?

The wrongdoings, to the environment, via weaponizing water in the Russia-Ukraine conflict, particularly in the destruction of the Kakhovka dam, can be prosecuted under international criminal law (ICL). It should be prosecuted due to Article 8(2)(b)(iv) Rome Statute (RS). The Article 8(2)(b)(iv) states: “intentionally launching an attack in the knowledge that such attack will cause [...] widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated” (IHL Treaty). However, ‘no criminal has ever been convicted of violating these provisions’ (Lawrence, 2007, p.75). So, it has been heavily criticised that the standards of Article 8(2)(b)(iv) are far too high most likely due to poor forecasting data for environmental damages and predictions cannot be absolutely certain that the damages will last for decades. Therefore, protection and sanctions for the demolition of the Kakhovka Dam, or any dam in the Russian-Ukraine conflict, will likely only subsist via the consequential ramifications it has on humankind, and not a crime against the environment.

3.1 ‘Green Criminology’ approach

In response to the lack of laws for crimes against the environment in war, some authors have opted for a ‘green criminology’ approach. This is an attempt to bring legal and political justice for ‘ecocide’. This approach ‘tries to integrate environmental components into the remaining core crimes of the RS, even though they do not explicitly mention the environment’ (Dumont, 2023). Currently, the criminalisation of ‘ecocide’ does not lead to meaningful accountability. The ‘greening’ approach is to understand the environmental destruction, such as weaponising water by destroying a dam, is a means to achieve objectives of the RS, such as Article 7 RS: Crimes Against Humanity (CaH) so that responsibility and blame for the destruction of the environment does occur legally - even if it is indirectly.

In order for the destruction of the Nova Kakhovka to be labelled as a crime against humanity two elements must be fulfilled: (International Criminal Court, 2013)

widespread or systematic attack on the civilian population must be proven

This has to be organised, not a random attack so the perpetrator has to have knowledge/ intent of the attack.

It must be proven that the destruction or ‘ecocide’ of the Nova Kakhovka dam was used/weaponized as a cohesive act that led to a certain degree of forced displacement of a large quantity of civilians. Whilst Russia still denies that they are responsible for the attack on the dam, let alone doing it with intent, there are numerous statements and documented attacks from Russian leadership to prove that Russia has intent to attack large quantities of the Ukrainian civilization.

The Expert Panel has no intention of adding ecocide, as a crime in the Rome Statute as it divorces it from the anthropocentric harm that is central to the Rome Statute. Whilst this is met with criticism from advocates of adding ecocide to the RS as ‘the natural world’s beauty, complexity and fragility suggest that it and its components in their own right have interests worthy of protection’ (Gray 1996, p. 225). Should international law change and instead proceed with a Bruno Latourian vision, challenging the conventional dichotomy between human agents and non-human objects to see nature as a ‘fully fledged actor’ (Latour, 2014, p.3) granting them rights of their own, especially in the age of the anthropocene to discourage the weaponisation of water?

4. Conclusion

The weaponisation of the Nova Kakhovka Dam for Russia to fulfil political and military aims, will have deep rooted effects on the environment and on civilians. Scientists call it an ‘unpredictable, potentially toxic timebomb’ (Mundy, 2025). The land that was once used for farming is ruined where heavy metals and chemical contamination grows

in concern for scientists which can easily contaminate soil if the land was to be used for farming again.

Is it fair that the environment can be used like a shared weapon in battles between rivals, completely powerless and silenced when atrocities and injustices are being carried out for an advantage in war? The advantage that the use of the environment has in war, may be small or marginal, but the effects of the usage on the environment are long-term and, by no means, inconsiderable for both the environment and future generations. In the age of the anthropocene, there needs to be an urgent call to protect

the environment in war. To reach the SDGs there must be laws in place that have harsh consequences. Water is at the centre of the climate crisis, 'Only 0.5 per cent of water, on Earth, is usable and available freshwater' (United Nations), destruction of dams puts even further pressure on available fresh water resources having major ramifications on water security particularly for low income countries.

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About the Article

How does Türkiye's Southeastern Anatolia Project (GAP) transform upstream water control into geoeconomic leverage over Syria and Iraq? This article argues that expanded hydropower and irrigation infrastructure convert hydrological dominance into domestic economic gains, producing asymmetric interdependence and downstream vulnerability. It concludes that GAP functions as a geoeconomic instrument enabling Türkiye to extract political, security, and development-related concessions.

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1. Introduction

Earth is warming up and the Middle East is increasingly becoming more arid, subsequently, water is transitioning from a renewable natural source to an economic and strategic asset. As climate change, rapid population growth and regional instability accelerate, the ability to control the upstream flow of transboundary rivers allows states to convert physical geography into durable political and economic influence.

The Euphrates-Tigris basin is shared by Türkiye, Syria and Iraq is one of these theatres of 'hydro-hegemony' where the most powerful actor in the river basin can increase their leadership position through a combination of infrastructure and strategic resource capture (Zeitoun & Warner, 2006). Current projections suggest a potential 30% decline in river flows by 2050, a crisis that threatens the GDP of downstream nations by as much as 14% (Belhaj, 2025). Within this high-stakes environment, Türkiye's Southeastern Anatolia Project (GAP) represents more than a domestic engineering marvel; it is a structural transformation of the regional balance of power.

This article addresses the following question: How does Türkiye's Southeastern Anatolia Project (GAP) convert upstream hydrological control into asymmetric economic interdependence and geoeconomic leverage over downstream states? It argues that the GAP functions as a geoeconomic instrument that transforms hydrological control into durable leverage over Syria and Iraq. By expanding upstream infrastructure, Türkiye generates domestic economic gains, specifically in energy security and agricultural surplus, that simultaneously impose acute vulnerabilities on downstream riparians. This process fosters a condition of „asymmetric interdependence,“ wherein water releases are increasingly utilised as a bargaining tool in regional security and diplomatic negotiations (Kibaroglu, 2021).

The analysis proceeds in four stages. First, it examines the structural conditions of power created by the geo-

graphical and infrastructural asymmetry of the basin. Second, it analyses Türkiye's domestic economic gains as a source of „geoeconomic capital.“ Third, it assesses the costs and loss of autonomy experienced by downstream states. Finally, it explores the strategic leveraging of these asymmetries in regional politics, including recent „oil-for-water“ and security-linked agreements.

2. Structural Conditions of Power: Geography, Hydrology, and Infrastructure

Upstream hydrological control in the Euphrates–Tigris basin is a product of inherent geographical asymmetry, which has been materially expanded and solidified by the infrastructure of the Southeastern Anatolia Project (GAP). The power dynamics of the basin are rooted in a geographic advantage that favors the upstream state. Türkiye contributes approximately 89% of the Euphrates' annual flow and 52% of the Tigris' flow, yet the rivers serve as the primary lifeblood for downstream Syria and Iraq (Food and Agriculture Organization, 2023). This creates an „exogenous“ dependency, where downstream states rely on precipitation and snowmelt that falls entirely outside their sovereign borders. Consequently, any hydrological shift at the headwaters, whether due to climate change or human intervention, is felt with amplified intensity by riparians at the end of the river course.

While geography provides the opportunity for control, the GAP provides the physical means to exercise it. The project, encompassing 22 dams and 19 hydroelectric plants, has fundamentally altered the basin's natural rhythm. The centerpiece, the Atatürk Dam, possesses a reservoir capacity of 48.7 billion m³, a volume that exceeds the entire average annual discharge of the Euphrates river itself (Daoudy, 2005). By 2026, the full operation of the Ilisu Dam on the Tigris has further institutionalized this control, allowing Ankara to regulate flows into Iraq with surgical precision, effectively transforming the river into a managed „tap“ (Chatham House, 2025).

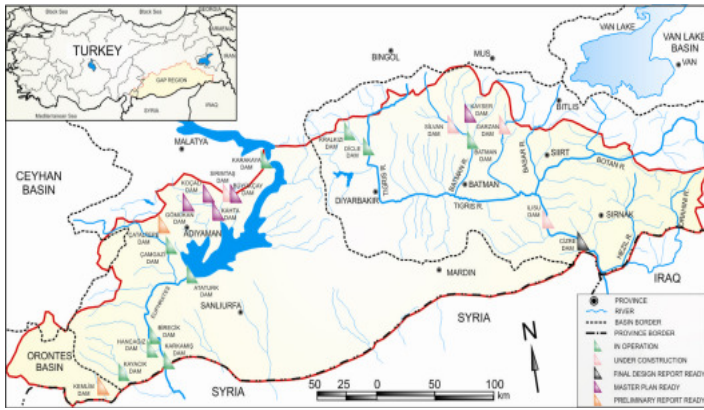


Figure 1: The GAP project (Kankal M. et al, 2016)

The structural advantage of the GAP extends beyond volume to water quality. As Türkiye expands its irrigation networks, the return-flow water entering Syria and Iraq carries higher salinity and agricultural runoff. Recent spatiotemporal analysis indicates that salinity levels and pollutant concentrations in the Euphrates system are significantly exacerbated by upstream discharge, particularly as the water crosses into Iraqi territory (Olewi et al., 2025). This degradation represents a form of governance spillover; while potentially a side effect of agricultural optimization, it results in the „export“ of environmental degradation to downstream actors, further weakening their agricultural viability and bargaining position (Kibaroglu, 2021).

3. Türkiye’s Economic Gains: How GAP Creates Upstream Geoeconomic Capital

Beyond the immediate hydrological advantages, the Southeastern Anatolia Project has yielded substantial macroeconomic dividends for the Turkish state. The GAP enhances Türkiye’s national economic capacity and strategic autonomy, providing the material „geoeconomic capital“ necessary to exercise external leverage.

A primary objective of the GAP is the expansion of Türkiye’s domestic energy production to reduce strategic dependency on foreign hydrocarbon imports. As of the end of 2024, Türkiye’s total installed hydraulic capacity reached approximately 32.77 GW, the highest conventional

hydroelectric fleet in Europe (International Hydropower Association, 2025). Hydropower currently contributes nearly 20% of the national electricity generation mix (Low Carbon Power, 2026). This significant domestic output is a cornerstone of Türkiye’s 2025–2027 Medium-Term Program, which projects a 2.4% reduction in the national energy import bill, totaling roughly \$64 billion, facilitated by the integration of large-scale renewable projects like the GAP (Daily Sabah, 2025). By insulating the national economy from global energy price volatility, the GAP infrastructure grants Ankara a degree of „strategic autonomy“ that bolsters its position in regional negotiations (Kibaroglu, 2021).

The GAP has fundamentally reoriented the economy of Southeastern Anatolia by converting semi-arid plains into high-yield agricultural zones. By December 2024, approximately 680,000 hectares were opened for irrigation, with the physical completion rate for energy projects exceeding 91% (Hidropolitik Akademi, 2025). This expansion has turned the region into a „food superpower“; for instance, cotton yields in the Harran Plain have tripled, making the region Türkiye’s top producer and supporting a national agricultural export target of \$31 billion by 2026 (Farmonaut, 2025). This agricultural surplus not only provides economic stabilization for the traditionally volatile southeastern provinces but also grants Türkiye „soft power“ as a vital food supplier to a region increasingly plagued by scarcity.

The multi-billion dollar „sunk-cost“ of the GAP has created a path-dependency that reinforces Türkiye’s commitment to its water policies. This domestic economic resilience serves as a foundational source of bargaining strength. While downstream riparians are highly vulnerable to flow fluctuations, Türkiye’s diversified economy and increasing renewable capacity, where solar and wind are now beginning to complement hydro, reduce its own vulnerability to regional retaliation (Ember, 2025). Consequently, Türkiye operates from a position of economic „depth,“ where the domestic gains from the GAP provide the security needed to prioritize national interests over downstream de-

mands in transboundary water disputes (Daoudy, 2005).

3. Downstream Economic Dependency: Costs, Vulnerabilities, and Loss of Autonomy

Conversely, the economic dividends reaped upstream find their opposite in the structural disadvantages imposed upon downstream actors. The structural regulation of the Euphrates and Tigris by Türkiye imposes acute economic vulnerabilities on Syria and Iraq, creating a state of asymmetric interdependence where downstream survival is decided by upstream political decisions.

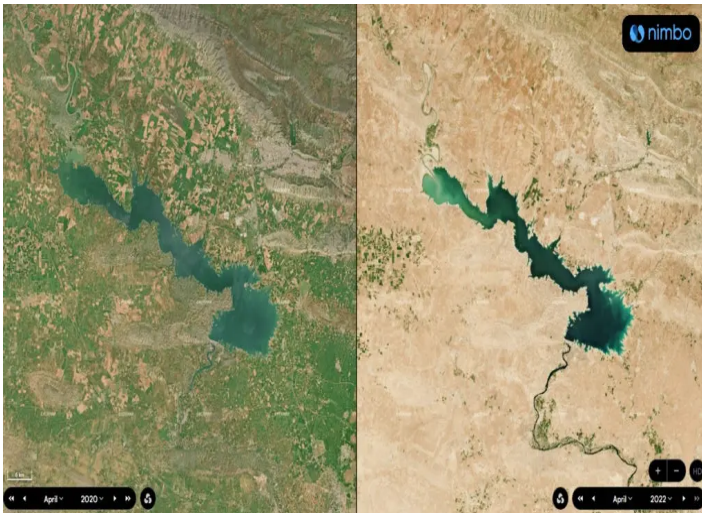


Figure 2: Satellite imagery/Data comparison of the Euphrates-Tigris basin (2020 vs. 2025), illustrating the dramatic reduction in surface water levels and the expansion of arid zones in downstream Syria and Iraq. (Daoulas Y., 2022)

Downstream riparians have witnessed a catastrophic decline in water volumes, exacerbated by both upstream infrastructure and climate-induced stressors. By late 2025, Iraq's water reserves plummeted to approximately 4 billion cubic meters, an 80-year low compared to the 60 billion cubic meters held in 2020 (UNESCO, 2026). In Syria, the winter of 2025 was the driest since 1958, with rainfall reaching only 25% of seasonal norms (ReliefWeb, 2025). This physical scarcity is not merely environmental; it is institutionalized by the ability of upstream dams to withhold flows during these „exceptional“ drought periods, forcing downstream states to move from a position of „riparian rights“ to one of „negotiated favors“ (Chatham House, 2025).

The lack of reliable water has triggered a systemic failure in downstream agrarian economies. In Iraq, the government was forced to ban summer and winter cropping for over 4 million hectares in 2025 to prioritize drinking water, leading to a 50% drop in anticipated wheat and barley yields (UNESCO, 2026; FAO, 2025). Syria faces a similar trajectory, with a wheat shortfall of 2.73 million tonnes reported in late 2025, leaving 75% of the country's rain-fed farmland crippled (World Weather Attribution [WWA], 2025). These losses have catalyzed massive internal displacement: as of late 2025, over 186,000 people in Iraq remained displaced due to climatic factors, with rural households migrating to overcrowded urban centers in search of livelihoods (UNESCO, 2026).

This economic fragility has solidified a condition of asymmetric interdependence. While Türkiye utilizes the GAP to enhance its „food superpower“ status, Iraq and Syria have become „import-dependent“ actors, increasingly reliant on international markets, and often Turkish exports, to fill food security gaps. The substitution of water is physically impossible, making the structural dependency absolute. Recent developments in 2025 show that Iraq has been forced into „short-term water negotiations,“ seeking month-to-month releases from Ankara rather than a permanent treaty (Fanack Water, 2025). This shift indicates a profound loss of autonomy, as fragile downstream states lack the bargaining power to retaliate against upstream restrictions without risking total agricultural or humanitarian collapse (IISS, 2025).

4. Leveraging Asymmetry: GAP as a Geoeconomic Tool in Regional Politics

How is this used concretely? How do actors take political advantage of their own potential for control to turn it into actual geoeconomic leverage? Türkiye strategically utilizes its infrastructural control to transform economic and hydrological dependency into a decisive instrument of foreign policy and regional security.

The physical capacity to regulate the flow of the Euphrates and Tigris allows Ankara to practice „issue-linkage,” where water volume is traded for security or political concessions. This was historically codified in the 1987 Protocol, but the practice has intensified in the mid-2020s. In April 2024, during a historic visit to Baghdad, Türkiye utilized the promise of a „guaranteed” water release as the primary incentive for Iraq to designate the PKK (Kurdistan Workers’ Party) as a banned organization and to secure cooperation on the \$17 billion „Development Road” project (Chatham House, 2025; Daily Sabah, 2024). This „Water-for-Development” logic demonstrates that water is no longer treated as a separate environmental issue, but as a central currency in Türkiye’s geoeconomic strategy.

The economic fragility analyzed in previous sections directly diminishes the sovereign bargaining capacity of Syria and Iraq. By maintaining downstream states in a condition of „perpetual scarcity,” Türkiye effectively limits their ability to project power or challenge Turkish regional interests. For example, in Northern Syria, the periodic disruption of the Alouk water station has been analyzed not merely as a technical failure, but as a tactical exercise that creates domestic unrest and forces local actors to prioritize basic survival over political resistance (IISS, 2025). When a state must devote its entire diplomatic capital to securing the next month’s water release, it loses the „strategic depth” required to contest Turkish military or economic expansion.

The GAP is the cornerstone of Türkiye’s transition from a middle power to a „Hydro-Hegemon” (Zeitoun & Warner, 2006). By positioning itself as the „battery” and „breadbasket” of the region while controlling its neighbors’ most vital input, Türkiye has achieved a form of „structural power.” This power is reinforced by the „Strategic Framework Agreement” signed with Iraq in 2024, which seeks to integrate Iraqi energy resources with Turkish water management (Middle East Monitor, 2024). This creates a regional order where the survival of downstream regimes is functionally linked to their alignment with Ankara’s geopolitical objectives, completing the transformation of the

GAP from a development project into a geoeconomic weapon.

5. Conclusion

The analysis presented in this article confirms that Türkiye’s Southeastern Anatolia Project (GAP) has transcended its original identity as a regional development initiative to become a sophisticated geoeconomic instrument. By systematically converting geographical advantage into a centralized infrastructural „tap,” Ankara has established a condition of hydro-hegemony that dictates the economic and political realities of the Euphrates-Tigris basin. As this study has shown, the power of the GAP lies not merely in the physical withholding of water, but in the creation of a durable, asymmetric interdependence that leaves downstream riparians with few viable alternatives to cooperation.

Throughout this discussion, three central pillars of Türkiye’s leverage have emerged. First, the structural architecture of the basin, materially solidified by the Atatürk and Ilisu dams, has shifted the river systems from natural flows to managed assets. Second, the domestic economic capital generated through hydropower and agricultural expansion has granted Türkiye the strategic autonomy to weather regional tensions while simultaneously exposing Syria and Iraq to acute supply volatility. Finally, this economic vulnerability has been successfully converted into political leverage, as evidenced by the recent „water-for-security” and development-linked negotiations between Ankara and Baghdad.

Looking forward, the persistence of this asymmetric relationship faces two significant stressors: the accelerating impact of climate change and the growing obsolescence of existing international water law. With river flows projected to decline further by 2050, the „weaponization of scarcity” remains a potent threat to regional stability. While Türkiye continues to operate under a doctrine of absolute territorial sovereignty, the rising human and economic costs in Iraq and Syria may soon necessitate a transition from bilateral „favors” to a truly multilateral,

climate-resilient legal framework. Ultimately, the GAP serves as a definitive case study in how modern states

can deploy critical infrastructure to transform natural geography into a decisive tool of regional power.

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About the Article

Do the monetary costs expected to be saved by businesses through simplification initiatives outweigh the possibly detrimental costs for environmental regulation? The shifting of the Commission's priorities is reflected in the policy overlap of the omnibus package on sustainability and the comprehensive sustainability regulation framework outlined in the European Green Deal. The current focus lies in boosting competitiveness, which tends to sideline climate action.

About the Author

Roosa Lähdeviiki is an MSc student of European Studies at the University of Helsinki, majoring in EU studies. She also has a BA in International Studies from Leiden University. She has gained research experience from consulting to the Dutch MFA. Her research interests include international relations and climate policy in particular. In 2026 she will intern at the Finnish Permanent Representation to the EU and take part in the European Student Assembly's panel on digital transformation.

The Omnibus packages, presented by the European Commission, pose various challenges to key instruments of the European Green Deal (EGD) and, hence, constitute a challenge for climate and environmental governance in Europe. The EGD was at the heart of the 2019-2024 Commission, but there has been a shift in priorities for the 2024-2029 Commission (Bertram, 2025). The Omnibus packages aim at simplifying, implying that a green Europe could also be achieved in a manner that is less burdensome for those subject to regulation (Ibid.). It is rather clear, however, how this can be seen as a threat to green governance, if it means diminishing scopes, delaying timelines, and softening enforcement (Ibid.).

The first omnibus package, presented on 26 February 2025, focuses on sustainability, aiming to reduce the complexity of EU requirements for sustainability reporting and due diligence obligations for businesses (Council of the European Union, 2025). Only EU companies employing around 1000 employees and with a new annual turnover of over €450 million will have to partake in this reporting (European Parliament, 2025). The same rules apply to non-EU companies, as well as to their subsidiaries and branches generating turnover of more than €200 million in the EU (European Parliament, 2025). Significantly reducing the number of companies subject to the Corporate Sustainability Reporting Directive (CSRD) poses a threat to the underlying idea of sustainable finance (Baumüller, 2025). The CSRD was a considerable milestone of the EGD, and sustainable finance has a key role to play in delivering on its policy objectives (Baumüller, 2025; European Commission, n.d.).

As stated in the omnibus package on sustainability, due diligence obligations, on reducing their negative impact on the planet, will only be required from EU corporations with over 5000 employees and a net annual turnover of over €1.5 billion and for non-EU companies above the same turnover threshold in the EU (European Parliament, 2025). Scholars have pointed out that there is a critical gap in the Commission's proposed new approach to set-

ting thresholds for sustainability reporting: the absence of a comprehensive assessment of related sustainability impacts. Furthermore, the arbitrary nature of these threshold changes is alarming, as they not only disproportionately affect different sectors but also fail to align with actual sustainability impacts (Baumüller, 2025).

It is not by simplifying or removing administrative requirements that the EU will succeed in restoring the competitiveness of European business (de Sadeleer, 2025). This is because the majority of the problems are not administrative, but structural by nature (de Ibid.). These structural challenges point to, for example, energy prices and the dependency on raw materials produced outside of Europe (Ibid.). The challenges brought forward raise the question of how the European economy can be transformed to make it not only climate neutral but also resilient and fair, as connected to the sustainable development goals (SDGs), which the EU is also committed to (Ibid.). The high level of ambition of the EU, through the SDGs, the EGD, CRDS, and the omnibus packages, both in trying to balance the demands of business and the environment, is perhaps a task too large to handle. This can be seen in these various overlapping and incompatible policies placed on the agenda simultaneously.

A more structured, interdisciplinary impact assessment is necessary, taking into account sustainability science, economics, and industry-specific insights (Baumüller, 2025). The focus of the current Commission lies on boosting competitiveness and providing legal certainty for businesses to flourish sidelines environmental and climate action, and is therefore rather incompatible with the EGD, although it claims to aim to keep the EU's environmental objectives intact. The EU's sustainability reporting framework arguably risks being severely compromised, in a time where sustainability moves beyond a mere moral concern towards a business imperative (Baumüller, 2025). This is all laid on the table in a context of various other challenges that need to be addressed when dealing with the climate crisis. Indisputably, the task of balancing efficient operations

of business with environmental goals is not an easy task. The question remains: do the monetary costs expected to be saved by businesses from simplification initiatives truly outweigh the possibly detrimental costs for environmental regulation?

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About the Article

How can the EU accelerate climate tool adoption for smallholders in Africa and SE Asia without increasing financial risk? Loan-based models create debt burdens during crop failures; thus, a grant-based instrument within the NDICI-Global Europe framework is essential to fund both technology and long-term support. These grants serve as a preventive stabilization tool, reducing global insecurity by protecting 260,000 farmers' livelihoods.

About the Author

Matilde Torti obtained a Bachelor's degree in European Studies from Maastricht University in August 2025. Her research focuses on European defence and security, especially European strategic autonomy. She has also researched EU enlargement, with a focus on Moldova. Since September 2025, she is enrolled in the Advanced Master in International Relations and Diplomacy at Leiden University. Her mission is to support European security and foreign policy through research and practical engagement.

1. An EU Innovation Grants Instrument to Accelerate Climate Resilience Adoption Among Smallholder Farmers in Partner Countries

Climate change is increasingly recognised as a driver of foreign policy and security risks; EU institutions have described it as a ‘threat multiplier’ with serious implications for peace and security, and have called for integrating climate-related risks into security and defence policy planning (European External Action Service, 2022). Climate change is reshaping the natural and human systems worldwide, resulting in rising global temperatures worldwide through higher greenhouse gas emissions from human activities, which fuel severe natural disasters, such as heatwaves, floods, storms, droughts, and wildfires, that threaten lives and critical infrastructure (World Health Organisation, 2023). For the EU, investing in adaptation and resilience in partner countries is therefore not only an environmental or development matter: it is also a preventive stabilisation tool that can reduce the likelihood that climate impacts cause wider instability and humanitarian crises, requiring costly emergency interventions, while also strengthening global support and financing for climate resilience (European Commission, n.d.).

Against this background, smallholder farmers constitute a key intervention point. They are often highly exposed to climate shocks and have limited assets, such as insurance or savings, to recover from extreme events (Thompson, et al., 2023), despite the existence of investment programmes by other private foundations (e.g. The Rabobank Foundation). The adoption of practical resilience tools in the long term requires a capable actor such as the EU to ensure monitoring, maintenance, training and coordination with the local communities to increase its effectiveness.

This policy paper proposes a dedicated EU Innovation Grants Instrument for smallholder climate adaptation in partner countries in Africa and South-East Asia. It will do so using the existing framework provided by NDICI–Global Europe, the EU’s main external financing tool, and

aligned with Global Gateway investment partnerships. The facility would finance first, the adoption of climate technologies, and second, it would support the post-adoption support, through training, repair networks and technical advice.

2. High exposure, low adoption

Climate change is placing smallholder farmers at great risk by disrupting the weather patterns and ecosystems. Increasingly frequently, droughts, floods, and other natural disasters damage crops and livestock, reduce yields and increase the risk of crop failure. This directly threatens the income of small farmers, who often do not have access to the necessary resources to safeguard their production, and therefore live at the poverty line (UNDP, 2025).

Despite the existence of investment programmes, climate risks are expected to increase in smallholder farming systems in the form of extreme events; yet, the adoption of climate resilience tools remains too slow. A major obstacle is practical implementation: tools are not always designed for the smallholder context; maintenance, repairs and locally accessible support needed may be lacking. As a result, despite the existence of climate tech tools, resilience does not result in sustained resilience outcomes in practice.

3. Finance as an adoption barrier: why grants matter

Finance is central to the adoption gap. Loan-based approaches can help acquire the technologies, but they often primarily benefit better-resourced and wealthier farmers. In contexts where climate change creates income volatility, debt-financed adoption of climate technologies can increase vulnerability, especially if farmers are ex-

pected to repay even after harvest failures. For this reason, grants avoid debt burdens by not generating the debt that loans can entail for smallholder farmers, especially in lower-income contexts.

A grant-based approach is also a preventive mechanism. The aim of grants is to reduce future crisis costs by funding resilience, rather than financing post-disaster recovery. Moreover, grants can be designed to avoid dependency by being time-bound, targeted at initial adoption and the immediate post-adoption phase, and linked to clear milestones, such as training completed and technology installed.

4. The EU's role: external action

The European Union is already internally deploying climate technology for smallholder farmers to boost sustainability, resilience to extreme weather, and stability of income through initiatives under the Common Agricultural Policy (CAP). Key focus areas include affordable digital solutions, circular economy techniques (biomass to energy), and soil health management, with projects aiming to make these technologies accessible to small, resource-constrained farms (European Commission, 2023).

However, the EU has the institutional and financial architecture to support climate resilience beyond its institutional borders in partner countries. The Neighbourhood, Development, and International Cooperation Instrument (NDICI-Global Europe), launched in 2021, is the EU's main instrument for international cooperation and external action and is designed to contribute to sustainable development, prosperity, peace and stability worldwide. In parallel, the Global Gateway strategy sets the framework for investment partnerships that support sustainable, resilient infrastructure and explicitly includes investments in climate mitigation and resilience.

Given this existing framework, the EU is the right actor for this initiative, as it has both strategic incentives, a wide network of partners and the delivery capacity to successfully support smallholder farmers in Africa and South-East

Asia.

First, the EU's own security and foreign policy interests are directly affected by climate-generated instability, so investing in resilience mechanisms abroad also represents a strategic choice. Second, the EU can operate through a wide range of established frameworks and instruments, giving it different roots to support this initiative. Third, through coordination among Member States, it can set up common standards for transparency and monitoring, making outcomes visible and comparable across countries.

5. Policy proposal: an EU Innovation Grants Instrument for climate adaptation

This policy paper proposes:

- **Establishment:** of a dedicated Innovation Grants Instrument for smallholder farmers' climate adaptation within EU external action.
- **Purpose:** accelerate the adoption of climate adaptation and resilience technologies while avoiding the risk of debt associated with loan-based financing in fragile contexts.
- **Eligible climate technologies include:**
 - Drought- and flood-tolerant seed varieties
 - Solar-powered irrigation
 - Efficient water pumps
 - Rainwater harvesting technologies
- **Grants should also cover enabling conditions for sustained adoption:**
 - Training
 - Local maintenance capacity
 - Access to technical expertise
- **Delivery:** EU delegations in collaboration with local communities and partners on the ground.
- **Eligibility criteria** prioritise vulnerability and exposure to climate risks, while accounting for the feasibility and sustainability of use.

6. A clear benchmark for delivering: portfolio targeting and measurable reach

To strengthen the accountability and political signalling, the project should be linked to a clear target. The benchmark is to support 260,000 farmers in Africa and South-East Asia by 2035. The allocated funds should be monitored through public reporting on allocations and outcomes, ensuring comparability across countries over time.

7. Monitoring and evaluation

The effectiveness of the Innovation Grants Instrument should be tracked using a set of indicators.

These should reflect:

- **Reduction** in reported climate-related yield loss
- **Increase** in farm income
- **Increase** in production/yields
- **Improvement** in the quality of life/livelihoods
- **Expansion** in the number of farmers reached through the instrument

These indicators would also signal improved livelihoods and food security, reducing the risk that climate shocks escalate into broader crises.

8. Conclusion

Treating climate adaptation as part of EU external action is strategically necessary: if climate change is a threat multiplier, then strengthening resilience in partner countries is a form of preventive stabilisation that can reduce the risk of wider crises. Smallholder farmers are a key intervention point because they are highly exposed to climate shocks, yet adoption of resilience tools remains too slow. An EU Innovation Grants Instrument would address this gap by enabling rapid uptake of technologies without adding burdens caused by debt to partner countries, especially

in fragile contexts, thereby translating EU climate-security commitments into concrete resilience outcomes.

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