SYRIA CAUGHT IN THE VISE OF CLIMATE, LAND, AND WATER:

A Holistic Risk Assessment from Environmental Vulnerability to Energy Security

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ABSTRACT

Following the political transition that began in December 2024, Syria is being compelled to pursue the recovery of its energy sector under mounting physical and institutional pressure from climate change. This study systematically indexes the climate-related risks facing Syria — drought, water insecurity, land degradation, and food crisis — and presents a prioritization and costing framework for managing these risks. It further argues that the country's energy-transition pathway should rest not on a "fully green" model but on a more reasonable, phased basket capable of meeting urgent energy needs and baseload demand. Directly linked to TESPAM's prior projection and financing analyses of Syria's energy sector, this study was prepared as TESPAM's contribution to the Syria Policy Dialogues workshop "Climate, Land and Water: Environmental Pressures and Political Risk in Syria," held in Damascus on 18–19 July 2026 by The Syria Report and the Omran Center for Strategic Studies.

Keywords: *Syria, climate change, water security, food security, energy transition, baseload, climate finance, risk management.*

I. INTRODUCTION

More than thirteen years into a civil war and nineteen months into the political transition that began in December 2024, Syria is simultaneously rebuilding its institutions and confronting an environmental-pressure spiral that is increasingly becoming a "direct political-risk factor." Indeed, the workshop "Climate, Land and Water: Environmental Pressures and Political Risk in Syria," held on 18–19 July 2026 at the Royal Semiramis Hotel in Damascus under Track 1.5 status and the Chatham House Rule, organized in cooperation between The Syria Report and the Omran Center for Strategic Studies (2026), is a clear indication that this spiral has now moved to the center of policy debates on Syria's transition.

As TESPAM (Türkiye Energy Strategies and Politics Research Center), our comprehensive body of work on Syria's energy sector — particularly our report on Syria's energy situation and its scenario projections extending to the year 2100 (TESPAM, 2026a), and our study addressing the infrastructural and financial dimensions of Syria's electricity crisis (TESPAM, 2026b) — form a natural continuation of and complement to the contribution offered to this workshop. That said, whereas our earlier work focused predominantly on the geopolitical, commercial, and financial dimensions of energy supply, this article deliberately shifts

toward the environmental-climatic axis, addressing energy security together with the effects of climate change on water, land, and agriculture within a holistic risk framework.

The purpose of this study is accordingly threefold: first, to index the climate-related risks facing Syria by type and severity and to produce a risk map; second, to prioritize and roughly cost the intervention areas required to manage these risks; and third — and this is precisely where TESPAM's energy-focused perspective makes its principal contribution — to argue that Syria's energy-transition pathway should rest not on the "fully green" model sometimes imposed by international climate discourse, but on a more reasonable and phased energy basket capable of meeting the country's urgent and chronic energy shortfall, particularly baseload demand. It is precisely at this point that the tension between climate vulnerability and energy security becomes most sharply visible in the Syrian case.

II. CONCEPTUAL FRAMEWORK: THE CLIMATE–WATER–ENERGY–SECURITY NEXUS

The literature on how climate change amplifies security risks in fragile and post-conflict states is generally examined under the heading of the "climate-conflict nexus." An important methodological caveat in this literature, however, is that climatic stressors do not directly and solely "cause" political instability; rather, they function as a multiplier that amplifies existing socioeconomic and institutional vulnerabilities. Syria is frequently cited in this literature: the prolonged drought of 2006–2011 has been assessed as one of the factors that accelerated rural migration and fed social tension on the urban periphery. In short, it must be underscored that this relationship is not linear and deterministic but indirect and amplifying in character.

The framework adopted in this study is a holistic "nexus" approach that addresses the relationship between climate change and water security, food security, energy security, and socio-political stability together. In this approach, risk is conceptualized as the product of likelihood (the probability that a climatic event or process will occur) and impact severity (the magnitude of the consequence should it occur); vulnerability, in turn, is defined as the combination of exposure, sensitivity, and adaptive capacity. Indeed, the Notre Dame Global Adaptation Initiative (ND-GAIN) index seeks to measure precisely these three components — across the food, water, health, ecosystem-services, human-habitat, and infrastructure sectors (ND-GAIN, 2026).

III. PHYSICAL MANIFESTATIONS OF CLIMATE CHANGE IN SYRIA

III.I. Changes in Temperature and Precipitation Regimes

The ND-GAIN Country Index methodology measures a country's climate vulnerability across six vital sectors: food, water, health, ecosystem services, human habitat, and infrastructure (ND-GAIN, 2026). Current data compiled by CARE Climate Change (2026) place Syria among the countries showing high vulnerability across all six sectors, while simultaneously ranking it among the world's least prepared countries in terms of readiness to address climate change. Although the precise ranking figures can vary somewhat between different annual versions of the index — a methodological caveat worth noting — the direction is consistent

across all datasets: vulnerability is high and adaptive capacity is low. This picture is clearly and directly linked to the institutional and infrastructural devastation wrought by thirteen years of civil war.

Technical data from the field lend concrete weight to the severity of this picture: according to an expert from the General Authority for Remote Sensing, the country's northern and eastern regions have experienced a decline in rainfall of up to 40 percent relative to historical averages over the past two decades, accompanied by an average temperature rise of roughly 1.5°C since the turn of the millennium; as a direct consequence of this climatic deterioration, the length of the agricultural growing season in the Euphrates Basin has also shortened by 20–30 percent (Carnegie Endowment for International Peace, 2026). Global climate projections, depending on the emission scenario, foresee an additional 1–3°C of regional warming by 2050 (CARE Climate Change, 2026) — a trajectory that points not toward a near-term easing of the existing vulnerability, but toward its deepening.

III.II. The Volatility of the Euphrates Basin and the Transboundary Water Regime

At the heart of Syria's water-security problem lies a climatic aridification and precipitation-irregularity trend that spans the entire Tigris-Euphrates basin. The Euphrates originates in Turkish territory and, in its lower reaches, sustains both Syria and Iraq; it is thus a river shared jointly by three countries. Accordingly, the deterioration of the basin's precipitation regime is a shared, basin-scale climatic phenomenon that directly affects not only Syria but also the southeastern regions of Türkiye, which has itself experienced severe drought periods in recent years (Fanack Water, 2025). In this context, the occasional decline of basin flow below anticipated levels stems not from the choice of any single actor but, to a large extent, from a climatic aridification affecting the entire basin and striking all three countries simultaneously. Indeed, the decline in water levels at the Tabqa, Tishrin, and Baath dams has caused production losses across extensively irrigated land on the Syrian side and harvest losses for local farmers, leaving 2.5 million people facing serious food insecurity (Fanack Water, 2025). Compounding this, the dams in question were damaged over an extended period by terrorist organizations, with damage extending from water-retention capacity to discharge systems and much of the associated infrastructure.

As also underscored in TESPAM's (2026a) earlier study, a critical point worth emphasizing is that Syria's water regime does not follow a linear aridification curve but is instead becoming an increasingly volatile system. While the winter of 2024–2025 was recorded as the driest in thirty-six years (The Week, 2025), the January–May 2026 period saw above-average rainfall nationwide, with dams and water basins reaching exceptional levels. The intense basin-wide water flow at the end of May 2026 pushed the Euphrates Dam reservoir to 98.5 percent capacity, requiring the full opening of its spillway gates for the first time since 1988 and causing floods that affected roughly 150 hectares of farmland in Raqqa, 1,000 hectares in Deir ez-Zor, and 2,400 households (FEWS NET, 2026a). Syria's water-security problem is thus not only one of "diminishing water" but also one of "unpredictable water." This volatility complicates both agricultural planning and — as will be revisited later in this study — hydropower generation, constituting a shared technical-management challenge for the basin as a whole.

On this point, TESPAM wishes to emphasize the following: rendering this basin-scale volatility manageable is possible only through a multidimensional and technically deepened cooperation with Türkiye. A joint

early-warning and reservoir-coordination mechanism that draws on Türkiye's experience with the Southeastern Anatolia Project (GAP), its hydrological-modeling capacity, and its long-standing accumulated expertise in dam operation would directly strengthen Syria's resilience against both drought and flash-flood risks. Türkiye has to date been the most active and most stable partner in Syria's energy and infrastructure reconstruction (TESPAM, 2026b); extending this accumulated expertise into the domain of water management is, for Syria, the most realistic path in terms of both time and cost.

IV. AGRICULTURAL AND FOOD-SECURITY VULNERABILITY

The structural vulnerability of Syrian agriculture consists of a pre-existing problem that has been compounded by climate change. At the outset of the war, roughly 67 percent of cultivated land and 53 percent of wheat production relied on rain-fed farming methods; by 2024, this dependence had risen to 75 percent of all crops (The Week, 2025). As a natural consequence, according to Food and Agriculture Organization (FAO) data, Syria's wheat harvest has declined by 75 percent since 2011; even during the 2008 drought, production fell only from four million tons to just above two million tons (New Lines Institute, 2026).

The damage to groundwater resources is equally grave. In northeastern Syria, three major drought periods between 2006 and 2021 caused an approximately 60 percent decline in groundwater levels, drying up roughly half of the traditional wells in the Aleppo and Hasakah countryside (Carnegie Endowment for International Peace, 2026). According to FEWS NET's February 2026 assessment, the combination of multi-year drought, the lasting effects of thirteen years of civil war, and weak economic conditions is likely to sustain acute food insecurity at IPC Phase 2 (Stressed) and Phase 3 (Crisis) levels nationwide through September 2026; limited foreign-currency reserves, meanwhile, are constraining import capacity and increasing the risk of disruption to the national food supply (FEWS NET, 2026b). The snowstorms and localized flooding experienced across Aleppo, Hama, Homs, Idlib, Latakia, and Tartus in January–February 2026 further damaged farmland and irrigation infrastructure, once again aggravating an already fragile picture (FEWS NET, 2026b).

V. LAND DEGRADATION, DESERTIFICATION, AND CLIMATE-INDUCED MIGRATION

Syria's location within a semi-arid climate belt structurally exposes the country to risks of land degradation and desertification; particularly in the badia (steppe) region of the south and southeast, land productivity is declining rapidly as overgrazing, inadequate land management, and diminishing rainfall converge. In this sense, land degradation functions not merely as an environmental problem but also as a driver of internal migration through the erosion of rural livelihoods. That said, the same methodological caution noted in Section II applies here as well: climate-induced migration is not a "cause" in itself, but one component of a multidimensional process intertwined with security gaps, economic contraction, and inadequate public services. Nonetheless, the erosion of rural livelihoods under climatic pressure increases population

concentration on urban peripheries and the associated demand for services, placing an additional burden on central and local government during the transition.

VI. INDEXING CLIMATE-RELATED RISKS BY TYPE AND MAPPING RISK

In light of the findings detailed above, it is possible to bring together the climate-related risks facing Syria within a single framework using a simple but functional risk-scoring method based on the product of likelihood and impact severity. Table 1 below presents the risk map that TESPAM has compiled from the sources cited above; the scoring uses a three-tier scale for likelihood (Medium / Medium-High / High) and a five-point scale for impact severity (1: limited — 5: critical).

Risk Type	Affected Sector / Area	Likelihood	Impact Severity (1–5)	Risk Score	Geographic Concentration
Chronic drought and precipitation regime disruption	Agriculture, rural livelihoods	High	5	Critical (20–25)	Hasakah, Raqqa, Deir ez-Zor, Euphrates Basin
Surface and groundwater depletion	Drinking water, irrigation, public health	High	5	Critical (20–25)	Hasakah and Aleppo countryside
Energy infrastructure–climate demand interaction	Electricity supply, heating/cooling demand	High	5	Critical (20–25)	Nationwide
Food security crisis (IPC Phase 3 and above)	Nutrition, social stability	High	5	Critical (20–25)	Nationwide, predominantly rural
Transboundary river-regime fragility (Euphrates flow)	Hydropower generation, irrigation, geopolitical relations	Medium–High	4	High (16–20)	Tabqa, Tishrin, Baath dams
Heatwaves and rising average temperatures	Public health, energy demand	High	4	High (16–20)	Interior regions, urban areas
Land degradation and desertification	Agriculture, food security, land value	High	4	High (16–20)	Badia/steppe region, southeast
Climate-induced internal displacement and migration	Social stability, urban services	Medium–High	4	High (16–20)	Rural–urban migration corridors
Flash flood events	Infrastructure, farmland, housing	Medium	3	Moderate (9–12)	Raqqa, Deir ez-Zor, Aleppo, Hama, Homs, Idlib, Latakia, Tartus
Institutional/financial capacity shortfalls	Climate-policy implementation capacity	High	4	High (16–20)	Nationwide, central institutions

Table 1. Indexing of Climate-Related Risks in Syria by Type and Geographic Risk Map (TESPAM compilation).

The most striking finding revealed by Table 1 is that four separate risk categories — chronic drought, water depletion, energy-climate interaction, and the food-security crisis — cluster at the "critical" threshold. This demonstrates that isolated sectoral interventions will be insufficient during Syria's transition, and that a

holistic policy architecture addressing the water-food-energy triangle together is required. Indeed, it is no coincidence that the energy infrastructure–climate demand interaction scores at the critical level: as intensifying heatwaves drive up cooling demand, the already erratic and irregular electricity supply cannot meet this additional demand, turning the energy crisis into a direct multiplier of climate change.

VII. SYRIA'S CLIMATE-RESPONSE PROCESSES: INSTITUTIONAL AND INTERNATIONAL FRAMEWORK

VII.I. Nationally Determined Contribution and Institutional Capacity

In 2018, Syria submitted its Nationally Determined Contribution (NDC) under the Paris Agreement, targeting a 20 percent reduction in greenhouse-gas emissions by 2030 through renewable-energy expansion, energy efficiency, afforestation, and improved waste management, while also including adaptation measures in water conservation, agriculture, disaster-risk reduction, and coastal protection (CARE Climate Change, 2026). However, the enduring legacy of conflict, financial constraints, and extensive infrastructural devastation are seriously hampering implementation of these policies (CARE Climate Change, 2026). Whether the institutional framework restructured under the Ministry of Local Administration and Environment since December 2024 will update these NDC commitments, and to what extent it will acquire implementation capacity, remains one of the most critical open questions of the near term.

VII.II. The Green Climate Fund and Access to the International Climate-Finance Architecture

The summer of 2026 marked a highly symbolic turning point for Syria's integration into the international climate-finance architecture: at its 45th Board Meeting, held in Dushanbe from 29 June to 3 July 2026, the Green Climate Fund (GCF) approved Syria's first nationally funded project to address water scarcity, allocating USD 27.7 million in financing (Arab News, 2026). This approval represents a natural continuation of a 2021 FAO-GCF capacity-building program and the June 2023 GCF Country Programme, which identified agriculture, resilient cities, and sustainable infrastructure as priority areas (Arab News, 2026).

This development nonetheless needs to be placed in proper perspective: since its founding in 2010, the GCF has approved more than USD 20 billion in financing to over 130 countries, with roughly USD 6 billion approved in 2025 alone (Arab News, 2026). Measured against this scale, the USD 27.7 million allocation Syria has received remains, in short, a symbolic opening that has yet to move beyond token status, covering only a very small fraction of the country's actual financing needs. That said, the World Bank's re-engagement with Syria for the first time since 2010, through the Syria Emergency Electricity Project (SEEP) (Norton Rose Fulbright, 2026), indicates that the multilateral financing architecture — when considered alongside the regional financing balance formed by Qatar, Türkiye, Saudi Arabia, and, indirectly, other actors detailed in TESPAM's (2026b) earlier study — is expanding incrementally.

VIII. THE FINANCING PROBLEM: STRUCTURAL BARRIERS LIMITING SYRIA'S ACCESS TO CLIMATE FINANCE

The barriers limiting Syria's access to climate finance are, in this context, not merely technical or administrative but directly structural in nature. Although sanctions have largely become a matter of history — with the Caesar Act fully lifted in December 2025 (TESPAM, 2026b) — the international banking system's risk appetite toward Syria has not yet fully normalized. The absence of a current and reliable credit-rating assessment for the country is raising project-financing costs for multilateral development banks and private investors alike. A further, parallel barrier is the ambiguity of the boundaries separating humanitarian aid, reconstruction, and climate adaptation/mitigation within the international donor community; this institutional uncertainty over which budget line should fund which activity is needlessly slowing the process.

A further factor that must be added — perhaps the most critical of all — is Syria's limited absorption capacity: the institutional human resources needed, at both central and local levels, to design, tender, and oversee large-scale climate-finance projects have eroded severely over thirteen years of war. Finally, the fact that competing reconstruction priorities — energy, water, housing, and health — are all simultaneously demanding financing within a limited fiscal space creates a risk that climate-adaptation projects, whose returns are less immediately visible, will fall behind other priorities. Taken together, the common denominator of these four structural barriers suggests that Syria's climate-finance problem should in fact be read as a "financing trilemma": unless humanitarian, reconstruction-oriented, and climate-oriented financing flows are properly coordinated, symbolic steps such as GCF approvals alone will remain insufficient to respond to the scale of the risks flagged as critical in Table 1.

IX. PRIORITIZATION AND COSTING FOR RISK MANAGEMENT

Building on the risk map presented in Table 1, TESPAM's proposed prioritization framework addresses short-term, life-saving/stabilizing interventions together with medium- to long-term structural-transformation investments. The cost estimates in Table 2 below are not official budget figures but illustrative estimates compiled by TESPAM on the basis of the scale of comparable regional interventions and publicly available project data — such as the UCC Holding consortium's USD 7 billion power-generation agreement; it should be underscored that these estimates do not substitute for final project-level feasibility studies.

Priority	Intervention Area	Time Horizon	Estimated Cost (USD million)*	Suggested Financing Source	Expected Impact
1	Emergency electricity-supply stabilization (gas imports, IPPs, grid repair)	Short (0–3 yrs)	1,500–2,000	Qatar (UCC consortium), Saudi Arabia, Türkiye (TEİAŞ), U.S. partnerships	Raising daily supply duration from 2–4 hours to 12+ hours
2	Euphrates Basin water-efficiency and irrigation modernization	Short–Medium (1–5 yrs)	350–500	Green Climate Fund (GCF), World Bank (SEEP), bilateral agricultural partnerships	Estimated 20–30% improvement in agricultural productivity
3	Phased, grid-compatible renewable-energy integration	Medium (3–7 yrs)	800–1,200	GCF, EU instruments, Gulf funds, private-sector investment	1.5–2 GW of additional capacity; partial reduction in imported-fuel dependence

Priority	Intervention Area	Time Horizon	Estimated Cost (USD million)*	Suggested Financing Source	Expected Impact
4	Drought-resilient agriculture, seed improvement, and fertilizer support	Short–Medium (1–4 yrs)	150–250	FAO, GCF, bilateral agricultural cooperation programs	Increased drought resilience; gradual improvement in IPC phase
5	Climate monitoring, early-warning systems, and institutional capacity	Short (0–2 yrs)	40–70	UNDP, GCF readiness fund, bilateral technical support	Strengthened decision-support capacity and data infrastructure
6	Land rehabilitation and desertification control	Long (5–10 yrs)	300–450	UNCCD mechanisms, GCF, regional funds	Containment of land degradation in the badia region

*Table 2. Prioritization and Costing Framework for Managing Climate-Related Risks (TESPAM estimates; *figures are illustrative).*

The most fundamental policy implication of Table 2 is that prioritization deliberately places "electricity-supply stabilization" first. This choice is not incidental; as will be detailed in the following section, even interventions that are vital in their own right — water efficiency, agricultural resilience, and land rehabilitation — cannot be sustainably implemented without a reliable electricity supply: irrigation pumps, cold-chain facilities, water-treatment plants, and agricultural-processing capacity are all, ultimately, electricity-dependent systems.

X. THE ENERGY-TRANSITION DEBATE: THE LIMITS OF THE "FULLY GREEN" APPROACH AND THE REALITY OF BASELOAD

X.I. The Scale of Syria's Energy-Supply Gap

Installed capacity of roughly 8.5 GW in 2011 was significantly destroyed over the course of the war; usable capacity today has fallen to approximately 2 GW, leaving daily electricity supply across much of the country limited to just two to four hours (Norton Rose Fulbright, 2026). To close this acute gap, authorities have turned to bridging solutions such as gas imports via Türkiye, floating power barges, and cross-border electricity interconnections; in the medium term, the rehabilitation of thermal assets, the strengthening of gas-supply chains, and the deployment of new renewable-energy capacity have emerged as clear priorities (Norton Rose Fulbright, 2026).

The concrete example of this bridging strategy is the USD 7 billion power-generation agreement signed in May 2025 by a consortium led by Qatar-based UCC Holding: the agreement covers the construction of four combined-cycle gas turbine (CCGT) plants with a combined capacity of approximately 4 GW in Aleppo, Deir ez-Zor, and Hama governorates, alongside a 1 GW solar power plant in the south (Al-Monitor, 2026). This ratio itself — baseload gas capacity designed at four times the scale of variable solar capacity — is in fact the most concrete indicator of the pragmatic energy basket Syria has effectively adopted. In addition, a new gas project signed with a Saudi firm in July 2026 (Al-Monitor, 2026), together with ongoing talks involving Siemens Energy and European firms such as Eni and BP (Gulf International Forum, 2026), show that Syria's energy reconstruction is evolving into a multi-layered architecture spanning hydrocarbons, power generation, renewable assessment, and offshore infrastructure.

X.II. Why a "Fully Green" Transition Is Not Realistic for Syria at This Stage

TESPAM's core argument on this point is as follows: under Syria's current conditions, proposing a model that bases the energy transition entirely on renewable sources is a well-intentioned approach that is nonetheless incompatible with realities on the ground. The reasoning behind this assessment can be set out as follows.

— The grid itself is not ready: high-share integration of variable sources such as solar and wind requires a flexible, well-functioning transmission-distribution infrastructure and adequate storage capacity; in a grid heavily damaged by war that currently manages to deliver only a few hours of supply per day, the technical apparatus needed to manage this variability simply does not exist.

— The scale of the acute baseload gap leaves no room for choice: with usable capacity down to a quarter of installed capacity (Norton Rose Fulbright, 2026), the priority — regardless of source type — is to bring dispatchable, predictable capacity online as quickly as possible; variable renewable sources cannot meet this urgent need on their own.

— Hydropower is not exempt from this risk either. The findings presented in Section VI show that the Euphrates regime is becoming increasingly volatile; the extreme spillway-discharge event of May 2026 (FEWS NET, 2026a) demonstrates that dam-based generation at Tabqa and Tishrin, even though regarded as a low-carbon baseload solution, is itself exposed to the very phenomenon of climate change — that is, it carries a "double vulnerability."

Finally, international capital's own preference points in the same direction: the great majority of energy reconstruction agreements — as in the example of the UCC consortium — are built on a hydrocarbon-heavy architecture (Al-Monitor, 2026; Al Majalla, 2025), confirming that investors, too, treat baseload reliability as the priority criterion in their risk assessments.

Indeed, as Al Majalla (2025) aptly observes, Syria's post-war energy future will be shaped largely by pragmatism, and fossil fuels will continue to lead the recovery process for the foreseeable future; at the same time, when grassroots solar-energy initiatives are considered alongside renewed international interest and the growing acceptance of the need for climate-conscious reconstruction, it becomes plausible that the country could build a hybrid energy model — with manageable foresight and balance. TESPAM's position in this study is precisely here: not "fully green," but not "entirely fossil" either — a phased hybrid basket with a carefully designed sequence and mix.

X.III. Toward a Reasonable Energy Basket: A Phased Roadmap

Within this framework, TESPAM proposes a three-phase energy-basket roadmap consistent with the medium scenario set out in its own earlier study (2026a) — that is, the scenario in which multi-actor financing and security balances persist, oil production gradually stabilizes, but the electricity crisis eases only slowly.

— Phase One (0–3 years) — Emergency stabilization: sustaining and diversifying gas imports via Türkiye, deploying floating power barges and existing CCGT projects, and repairing damaged transmission-distribution lines; the sole objective of this phase is to raise daily supply duration from two-to-four hours to a reliable level — in TESPAM's prioritization, twelve hours or more.

— Phase Two (3–7 years) — Gradual diversification: bringing online carefully scaled solar-energy investments compatible with grid transmission capacity (particularly in the south and interior regions with high solar potential); it is recommended that renewable penetration be kept within thresholds that do not destabilize the grid during this phase, with battery/storage pilot projects launched in parallel.

— Phase Three (7+ years) — Maturation and regional integration: gradually increasing the renewable share as storage and interconnection capacity mature; deepening regional grid integration with Türkiye and, potentially, Jordan; and strengthening the resilience of hydropower assets against climate risk (reservoir management, flood control).

The underlying philosophy of this phased approach is a sequencing of "energy security first, decarbonization second" — and this sequencing is not merely technical but also a socio-political necessity. The example of the November 2025 tariff reform and the January 2026 Damascus protests, detailed in TESPAM's (2026b) earlier study, shows that energy poverty continues to be a recurring source of social unrest. Securing a reliable and affordable electricity supply as soon as possible is therefore not merely an energy-policy objective but also a security measure that safeguards the political stability of the transition. In this light, it can be argued that the concept of "just transition" for fragile states should be broadened to encompass energy-access justice alongside climate justice.

XI. POLICY RECOMMENDATIONS FROM TESPAM'S PERSPECTIVE

In order to contribute to the policy briefing to be produced in the workshop's synthesis session, TESPAM submits the following recommendations under four headings — water and agricultural resilience, energy security, financing and institutional capacity, and, finally, deepening cooperation with Türkiye — for consideration by Syrian officials and international partners.

XI.I. Water, Land, and Agricultural Resilience

First and foremost, it is recommended that a "Climate Vulnerability Cabinet Committee" be established to unify the water-food-energy triangle under a single national coordination mechanism. The function of this committee would be to ensure that the risks flagged as critical in Table 1 are managed holistically rather than in sectoral silos. In addition:

— A Euphrates Basin-scale water-efficiency action plan should be prepared: incentive mechanisms for conversion to drip irrigation, making informal groundwater extraction traceable, and gradual rationalization of agricultural water tariffs should form the core components of this plan.

— Deepening technical cooperation with ACSAD (the Arab Center for the Studies of Arid Zones and Dry Lands) to accelerate drought-resilient seed breeding and to re-establish strategic grain-reserve capacity is important.

— Launching pilot programs for land rehabilitation and sustainable grazing management in the badia (steppe) region, with the participation of local communities, is necessary.

XI.II. Energy Security

Consistent with the prioritization logic detailed in Sections IX and X, the focus of the recommendations on the energy front is a regulatory approach centered on baseload reliability that does not exclude renewable capacity.

— Adopting a phased renewable-integration framework synchronized with grid capacity — drawing on the experience of Türkiye's EPDK/TEİAŞ — and launching a minimum storage pilot program tied to this framework would be a well-placed step.

— Systems that directly support climate resilience, such as irrigation, water treatment, and cold-chain facilities, need to be planned simultaneously with electricity-access investments and under a single budget line, thereby preventing energy and water-agriculture investments from proceeding in disconnected fashion.

XI.III. Financing and Institutional Capacity

— Strengthening a donor-coordination platform to resolve categorical ambiguity between climate finance, humanitarian aid, and reconstruction financing, and updating the GCF Country Programme (2023) to make its energy-water linkage more visible, are necessary.

— Expanding technical capacity-building programs for public personnel who will design and oversee large-scale climate-finance projects — an area to which institutions such as TESPAM Academy could also contribute — would be a well-placed step.

— Positioning regional think tanks such as TESPAM more systematically as providers of technical data and scenario analysis within Track 1.5 dialogue processes is important.

XI.IV. Deepening Cooperation with Türkiye

In TESPAM's assessment, the feasibility of the recommendations set out in the three headings above depends to a large extent on the scope and depth of the cooperation to be established with Türkiye. Given its geographic proximity, its basin partnership, and its track record as a stable partner throughout the transition, Türkiye occupies an unmatched position in Syria's effort to address climate-related risks. Accordingly:

— For the Tigris-Euphrates basin, a joint early-warning and reservoir-coordination protocol — drawing on Türkiye's GAP experience and hydrological-modeling capacity and covering both drought and flash-flood scenarios — should be negotiated at the technical level,

— The technical-cooperation framework between TEİAŞ and Syria's grid operator should be expanded to increase cross-border interconnection capacity and lay the groundwork for future regional electricity trade,

— Drought-resilient agricultural technology transfer, seed-breeding programs, and irrigation-modernization projects should be supported through TİKA,

— Technical-delegation exchange programs with relevant Turkish institutions (universities, the GAP Regional Development Administration, relevant ministries) should be institutionalized, so that the transfer of knowledge and experience is not confined to one-off visits.

In the end, the common denominator of the recommendations across these four areas is this: Syria's climate vulnerability is neither a purely technical engineering problem nor purely a financing matter; regional

cooperation — and, above all, an institutionalized partnership with Türkiye — will play a decisive role in rendering these risks manageable.

XII. CONCLUSION

Syria's transition is now being tested not only along the axes of security, political legitimacy, and economic reconstruction, but also along an increasingly severe axis of climate vulnerability. The risk map presented in this study shows that drought, water depletion, energy-climate interaction, and the food-security crisis cluster at a critical threshold; the prioritization and costing framework, in turn, demonstrates that managing these risks — from water efficiency to land rehabilitation — is ultimately contingent on a reliable electricity supply. It is precisely for this reason that, from TESPAM's energy-focused perspective, Syria's energy-transition pathway must clearly rest not on a "fully green" idealism but on a phased, realistic hybrid model that prioritizes urgent energy needs and baseload demand.

A further core conclusion of this assessment is that the risks detailed above — across the water, agriculture, and energy axes — are not of a scale that Syria can manage on its own. Given its geographic proximity, basin partnership, existing energy-infrastructure linkages, and its track record as a stable partner since the very start of the transition, a multidimensional and institutionalized cooperation with Türkiye is the single most decisive external condition for Syria's ability to address these climate-related risks effectively. Across a broad range spanning water-basin management, agricultural-technology transfer, energy-grid integration, and financing bridges, TESPAM's assessment is clear: Syria will be able to build genuine and lasting resilience against these multidimensional climate risks only through a close, technically deepened, and institutionalized cooperation with Türkiye.

Ultimately, the Syria Policy Dialogues workshop, to be held in Damascus on 18–19 July 2026, is expected to foster precisely this kind of holistic dialogue — one that brings together water, land, food, and energy security — among Syrian policymakers, technical experts, civil-society representatives, and international partners. Through this study, TESPAM aims to offer a concrete data and analytical contribution to that dialogue; in the next stage of the institution's ongoing research program on Syria's energy sector, it aims to translate the three-phase energy-basket roadmap and the Türkiye-cooperation recommendations proposed here into a more detailed feasibility and cost-benefit analysis.

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