

THE RIGHT TO WATER  
AND CLIMATE CHANGE

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THE ARAB WATCH REPORT ON  
ECONOMIC AND SOCIAL RIGHTS

# THE AGRARIAN ISSUE AND THE RIGHT TO WATER IN SYRIA

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Researcher



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The seventh edition of the Arab Watch Report focuses on the right to water. It was developed to provide a comprehensive and critical analysis of the status of this right across the region, particularly in the context of climate change and its growing impacts. The information and analyses presented aim to serve as a platform for advocacy toward the realization of this fundamental right for all.

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# THE AGRARIAN ISSUE AND THE RIGHT TO WATER IN SYRIA

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# CONTENTS

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<b>INTRODUCTION</b>	<b>06</b>
<b>METHODOLOGY</b>	<b>07</b>
<b>HISTORICAL CONTEXT</b>	<b>09</b>
<b>THE AGRARIAN COMMUNITY AND WATER MANAGEMENT</b>	<b>11</b>
<b>THE WATER ISSUE AND THE POLITICAL SYSTEM</b>	<b>14</b>
<b>CLIMATE CHANGE</b>	<b>17</b>
<b>THE IMPACT OF THE CONFLICT ON THE FUTURE OF WATER IN SYRIA</b>	<b>19</b>
<b>FRESHWATER AND HYDROPOWER</b>	<b>21</b>
<b>IRRIGATION AND GROUNDWATER</b>	<b>23</b>
<b>WATER IN SOUTHERN SYRIA</b>	<b>25</b>
<b>RESULTS AND RECOMMENDATIONS</b>	<b>27</b>
<b>REFERENCES</b>	<b>29</b>
<b>ANNEX</b>	<b>31</b>

# 01

## INTRODUCTION

The right to water constitutes an essential entry point to understanding the agrarian issue in Syria, not as an abstract legal right, but as a socio-political relationship that has been historically shaped through a complex interaction between agrarian community, the authority, and water resources. In the Syrian context, water has not been a neutral technical element; rather, it has been a dynamic factor that has contributed to structuring patterns of agricultural ownership, reproducing inequalities within rural areas, and shaping farmers' awareness of their rights and their limits.

Historically, regulating access to, and distribution of, water has been closely tied to shifts in power, ranging from local customs that governed the use of springs and irrigation networks to the intervention of the central state through agrarian reform laws and expansive irrigation policies. These transformations, however, did not necessarily achieve water justice; rather, they often produced shifts in favor of large landowners and reinforced political control over water resources as a tool for managing and disciplining rural areas.

With the growing impacts of climate change, the deterioration of water governance, and the fragmentation of state institutions during years of conflict, the right to water in Syria has become increasingly

fragile. Water scarcity has coincided with the severe depletion of groundwater, the destruction of infrastructure, the proliferation of de facto authorities, and the use of water as a means of pressure and conflict. In this context, this study examines the right to water as a central element in analyzing the Syrian agrarian issue, revealing the structural relationship between power, resources, and the stability of agrarian community.

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# 02

## METHODOLOGY

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This research adopts a qualitative case study design composed of three elements: the agrarian community, the authority, and water. The research design seeks to integrate historical and social contexts (the farmer and the state) with hydrological data (water) in explaining the theme of this report, "The Agrarian Issue and the Right to Water in Syria." The study aims to explore water as a dynamic non-human element within the agrarian issue and its role in shaping the political consciousness of Syria's agrarian community as a dynamic human element. For this case study, qualitative research was selected to analyze the narrative of the right to water, incorporating law, history, and geography as research resources, rather than relying exclusively on purely quantitative numerical data, without disregarding such data entirely. Miles and Huberman (1994) argue that qualitative research in such a model is appropriate when analysis is expected to rely on texts that can be compiled and further organized into semiotic components. This approach is particularly suitable for this study, as the historical narrative—including agrarian reform laws, irrigation and water legislation, and forms of land ownership—is central to understanding the interconnection between authority and agrarian community, and can be treated as semiotic components rather than numerical databases, which are addressed in the third element: water. It is essential to rec-

ognize that this study contains a unit of analysis focused on the agrarian issue in Syria, which is explored through the issue of water and the evolution of agricultural ownership within a constrained system represented by authority in Syria. In this work, the research applies the framework proposed by Creswell et al. (2007), which holds that a case study should provide an in-depth examination of a particular problem through a single case (or multiple cases) within a bounded system.

The geographical scope of this study encompasses all regions of Syria, and places a particular emphasis on the Euphrates River basin, given its significance as the country's largest watershed and its close association with the bulk of agricultural production. The researcher acknowledges the limited coverage of certain other areas of Syria, especially the far south and the far northwest, due to the lack of recent data resulting from deteriorating security conditions and their subjection to de facto authorities largely independent of Damascus. From a temporal perspective, the research design seeks to explore the evolution of farmers' political consciousness in relation to water. Case studies that address specific phenomena are considered valuable regardless of their limited generalizability (Punch, 2005). The relationship between the agrarian issue and the right to water in Syria constitutes a

genuinely unique case. This relationship, examined through the lens of water, has not been sufficiently studied; therefore, it represents a valuable case study even if it is not generalizable.

# 03

## HISTORICAL CONTEXT

After the Ottoman withdrawal in 1918, the communists were the first political organization in Syria/Lebanon to address peasant issues and their rights to water and land ownership. Their political program of 1931 recognized that "the peasants of Syria/Lebanon are the most oppressed class," and their statements called for peasants' rightful access to springs controlled by wealthy landowners. They also urged the government to implement water conveyance projects to villages and to provide social security for peasants (Dakroub, 2007).

During and after World War II, and following the departure of the French from the country, there was notable progress in the development of irrigation systems and drinking water supply. Large-scale military operations across Europe led to increased demand for grain, driving its market price from 4.5 in 1939 to 54 British pounds in 1943<sup>1</sup>. These increasing revenues enabled farmers to reinvest part of their income in improving production means related to irrigation networks and pumps, as well as securing energy resources for groundwater extraction. As a result, the area of cultivated land in Syria expanded to approximately 1.75 million hectares<sup>2</sup> during this period. Landowners, in particular, achieved considerable success in protecting water rights associated with their orchards. For example, the highly developed and very

ancient irrigation networks branching from the Barada River at varying levels through the Ghouta orchards encouraged land-owning horticultural farmers to develop local communal mechanisms for dispute resolution and to establish equitable customary norms governing water rights and distribution (Batatu, 1995). They typically settled their disputes among themselves and avoided resorting to state authorities as much as possible.

In Yabroud, in the Qalamoun Mountains, a unique irrigation system was linked to the springs of Lake Qrayna before it dried up, through which the lake's water was distributed to agricultural lands extending from the base of the lake to midway between Yabroud and Al-Nabk. The Yabroud irrigation system differed from other Syrian regions in terms of land ownership, as ownership of irrigated land was separated from the rights to water and its use: some owned the land without water, while others owned the water and leased it to farmers<sup>3</sup>. It is believed that, as in Ghouta, this distinctive ownership arrangement contributed to the development of a form of democratic understanding within the agrarian community, fostering cooperative solutions and a more equitable organization of wealth.

After World War II, due to successive crackdowns on the Communist Party and its inability to meet the demands of the

<sup>1</sup> Stephen, L. H., (1958) Mandate French Under Lebanon and Syria, Oxford: Oxford Univ. Press, p 328

<sup>2</sup> Bank international of development Economic of Syria; development and reconstruction, Jhon Hopkins Press, 1955, p 18

<sup>3</sup> Nur al-Din Aqil, The Old Irrigation System in Yabroud, Contemporary Syrian History Website, viewed on 12 January / December 2024

peasants, its membership from the peasant class declined, with many joining the organization led by Akram Hourani, which became known as the "Arab Socialist Party." This party played a major role in strengthening the peasant movement in Syria and in raising awareness of rights that had been denied by authorities, primarily represented by the feudal elite. Under Hourani's leadership, the Arab Socialist Party organized the first peasant congress in Syria, where "peasant liberation reached its peak in their struggle for rights to land, water, and social justice." The first popular peasant congress was held in Aleppo in September 1951 under the slogan "Land for those who cultivate it," attended by thousands of delegates from across Syria. This congress caused fear and alarm among the large landowners not only in Syria but also in Iraq and Egypt, marking the first event of its kind in the Arab world (Deeb, 2012).

During the second half of the twentieth century, the situation in Syria changed following a series of coups and the rise of the Ba'ath Party to power. There was a transformation in the nature of authority that was entirely at odds with the programs of the revolutionary democratic left wings within various communist and socialist parties, including the program of the Ba'ath Socialist Party itself during the rule of its radical leftist faction<sup>4</sup> from 1963 to 1970. Since 1974, the Syrian regime has relied on more dynamic centers of power within rural communities to maintain its rule, incorporating leaders from religious, tribal, and feudal authorities—figures who have historically dominated the rural collective landscape and do not necessarily align with the regime's ambitions.

<sup>4</sup> This wing was led by four main figures: Salah Jadid, Nur al-Din al-Atasi, Yusuf Zu'ayyin, and Ibrahim Makhous. The period of rule of the leftist wing was characterized by a diversity of opinions and a critical spirit in shaping government policies—something that the military Ba'ath later lost after 1970 (oral statement by Dr. Yusuf Suleiman).

# 04

## THE AGRARIAN COMMUNITY AND WATER MANAGEMENT

In 1932, the financial and regulatory system was reformed, providing peasants with access to loans (Hamada, 1935). These funds were invested in improving irrigation systems through durable production assets such as pumps, irrigation networks, and tractors (Table 1). This boom in both the quantity and quality of irrigation logistics led to an expansion of agricultural

land over a quarter of a century, from 1.75 million hectares in 1938 to approximately 6.9 million hectares<sup>5</sup> in 1963. Since then, small bourgeois classes, composed of large landowners and capitalists in primary agricultural industries, have driven the development of the agrarian issue in Syria and are expected to continue doing so.

➤ **Table 1: Agricultural production tools, pumps and tractors in Syria<sup>6</sup>**

▶ Year	1952	1962	1972	1982	1995	2000	2004	2010	2014	2016
▶ Tractors	977	5591	10374	35423	82603	97661	104583	115339	113315	114575
▶ Water Pumps	-	6717	13620	51967	92481	159441	184998	216840	215363	198051

During this period, Syria’s population grew steadily, increasing from approximately 1.5 million in 1922 to 22.5 million in 2022. Population growth was both a blessing for agriculture and a driving factor behind it. Two other key factors contributed to the development of agriculture: the penetration of capital into agricultural production, and the expansion of irrigation systems along with the right to access and extract water. Conversely, rapid demographic growth, combined with periods of

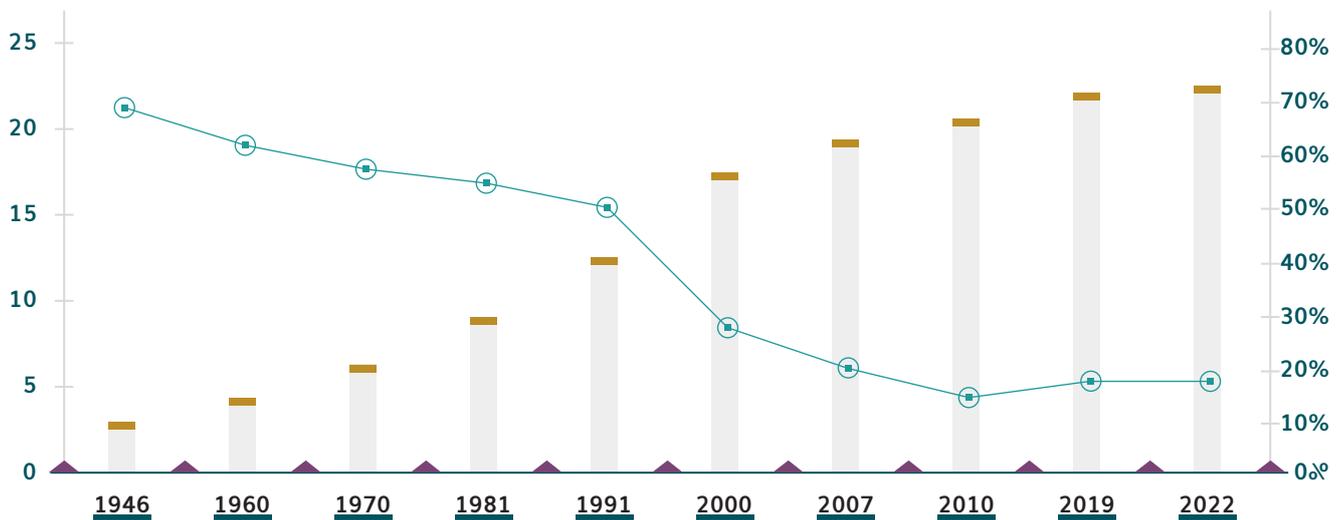
drought and recurring political conflicts, led to social unrest and large-scale rural migration (for example, in 2010), contributing to a relative decline in the rural population compared to the total population (Figure 2<sup>7</sup>). The weakness of basic services, such as electricity and drinking water in rural areas, was not a primary driver of this migration.

<sup>5</sup> Central Bureau of Statistics, Annual Statistical Compendium for the Year 1993 (Damascus: 1993), p. 35.

<sup>6</sup> Central Bureau of Statistics, Annual Statistical Compendium: 1974, p. 266; 1978, p. 244; 1983, p. 153; 1996, p. 149; in addition to data from the Central Bureau of Statistics website. Note: statistics from the Central Bureau of Statistics have been unavailable since 2017

<sup>7</sup> Central Bureau of Statistics, Annual Statistical Compendium: 1992, p. 90; 1994, p. 80; 1996, p. 58; and World Bank data, 2022.

➤ **Figure 2: Population in Syria for different years, showing the relative decrease of rural populations compared to the total population. Note the rapid decline in their numbers after Bashar al-Assad assumed power**



Until the late 1950s, most villages in Syria did not have drinking water networks; residents relied on springs and surface wells, and sometimes on open reservoirs that were exposed to microbial contamination. With the Ba'ath Party's rise to power, rapid progress was made in implementing drinking water networks in rural areas, primarily through pumping water from wells. Prior to the Syrian crisis in 2011, drinking water reached 99% of the urban population and 90% of the rural population, with nationwide coverage of 93%<sup>8</sup>. Electrification of rural areas played a decisive role in completing this network and advancing water management.

Rural electrification had a dual impact: it facilitated the extraction and transport of drinking and irrigation water to larger and more distant agricultural lands, leading to an increase in irrigated areas (Figure 3), but it also contributed to the depletion of groundwater and springs and to rising soil salinity. For example, the number of irrigation wells increased significantly in northwestern Syria since 2011 (Atik et

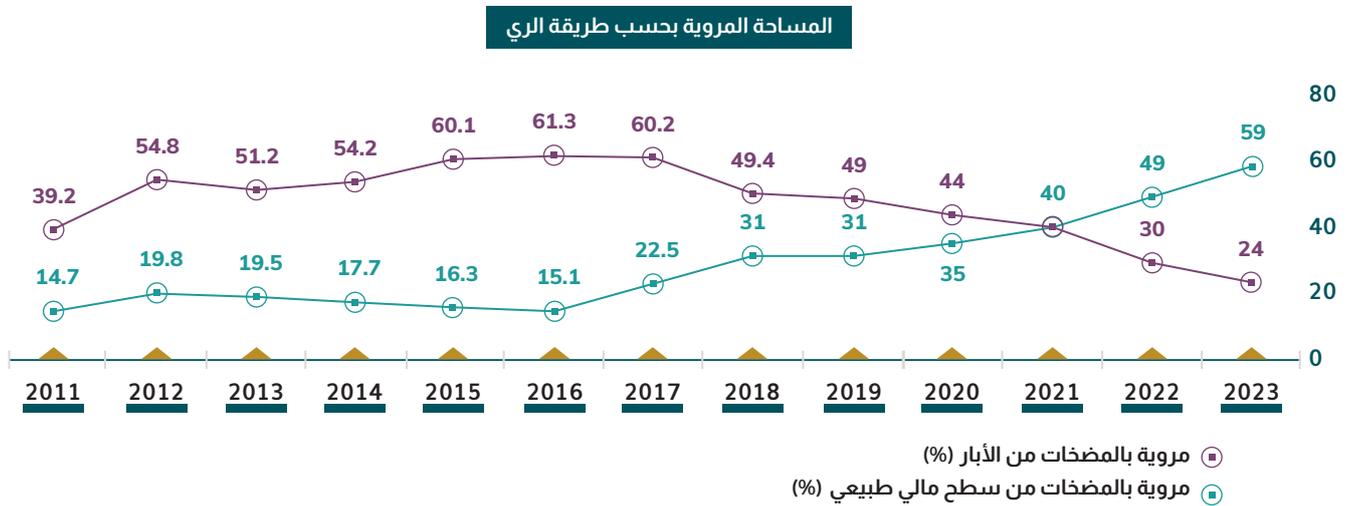
al., 2024). This large number of wells ultimately led to the widespread depletion of groundwater across the country. During the years of conflict, annual water consumption exceeded total renewable water resources by approximately 14% (Khlopov, 2019). In addition to the overexploitation of groundwater, Syria has suffered from repeated droughts and declining rainfall, which contributed to an increase in rain-fed agricultural land by 40.6% compared to irrigated land<sup>9</sup>. Figure 3 also shows that reduced reliance on water bodies for irrigation indicates a decline in their volume, serving as an indirect indicator of severe damage to the ecosystems that depended on these water bodies. These water bodies covered an area of 106,000 hectares and were habitats for approximately 588 species. In 2006, the Ministry of Local Administration and Environment acknowledged that these water bodies were vulnerable to shoreline encroachment, pollution, and overfishing<sup>10</sup>.

<sup>8</sup> Ministry of Housing and Construction. 2011. "National Performance Indicator Drinking Water and Sanitation Report".

<sup>9</sup> Central Bureau of Statistics, Annual Statistical Compendium: 1970, p. 192; 1981, p. 176; 1994, p. 106.

<sup>10</sup> Ministry of Local Administration, Third National Report on the Implementation of the Convention on Biological Diversity (Damascus: 2006), p. 4.

➤ **Figure 3: Percentage of irrigated agricultural land by irrigation method. Note the continuous general decline since 2016.**



Agricultural records indicate a steady decline in the area of cultivated land in Syria. Land under agricultural investment decreased from an annual average of 6.5 million hectares in the first half of the 1960s to approximately 5.7 million hectares in 2010, representing a decline of about 14%, while rain-fed land remained stable at 3.3 million hectares and forested areas at 576,000 hectares<sup>11</sup>. Following the outbreak of the Syrian war, cultivated land declined sharply, reaching only about 2.1 million hectares in 2024. This cumulative decrease in agricultural production is attributable to climate change, human encroachments, poor governmental agricultural management, and the nature of the political conflict in Syria, along with the resulting de facto authorities. Mismanagement and chaos in the handling of both groundwater and surface water resources led to a significant reduction in irrigated areas. In northwestern Syria alone, irrigated land fell by 15.3% and total cultivated land by 8.5% (Atik, op. cit.). As shown in Figure 3, despite massive national investments in large-scale irrigation networks<sup>12</sup>, only a relatively small increase in irrigated land was

achieved during the period of centralized governance from Damascus, totaling just over 5.7%. This modest gain was further eroded with the onset of the Syrian crisis in 2011, dropping to just over 1.9%<sup>13</sup> (Figure 4).

<sup>11</sup> The official page of the General Commission for Agricultural Research

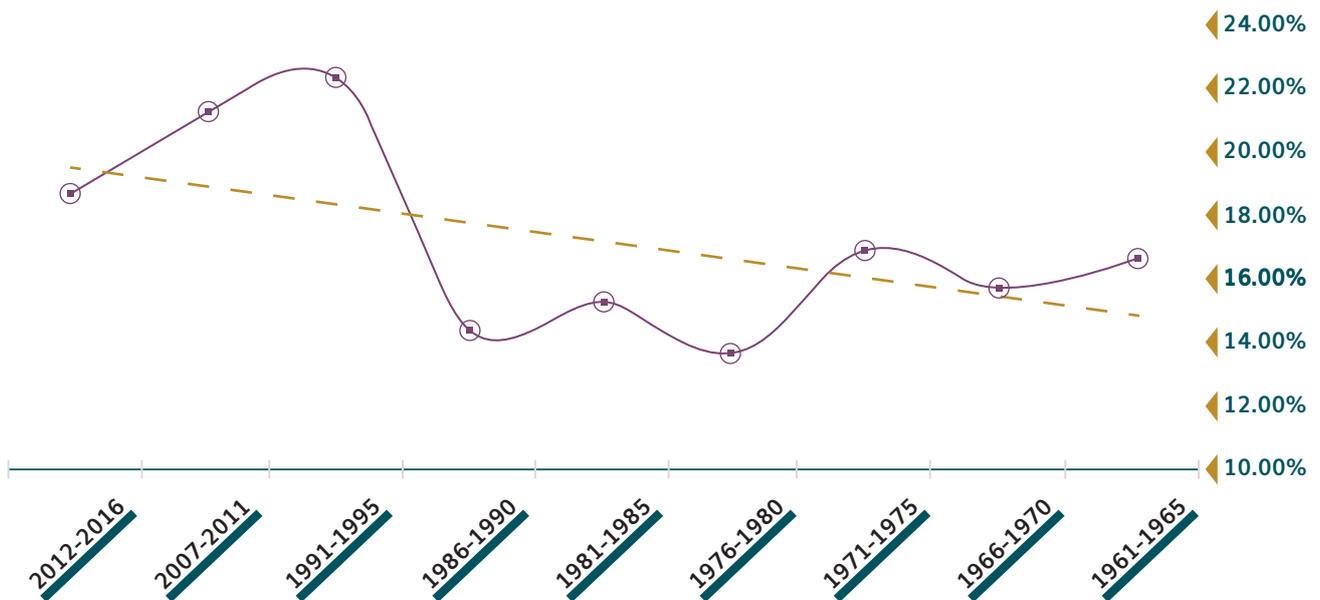
<sup>12</sup> From the completion of the construction of the Euphrates Dam until 1985, 65,958 hectares of agricultural land were reclaimed.

<sup>13</sup> Central Bureau of Statistics, various years.

## 05

## THE WATER ISSUE AND THE POLITICAL SYSTEM

➤ **Figure 4: The proportion of irrigated land relative to total agricultural land in Syria. A general and continuous decline since 1991.**



When Adib Shishakli assumed the presidency in the 1950s, he focused on developing Syria's economy, with particular emphasis on agriculture and the implementation of large-scale irrigation projects (Brazi & Fansah, 2022). With the enactment of the Agrarian Reform Law in 1958, coupled with the social pressure led by the Arab Socialist Party under Akram Hourani, conditions for peasants began to change. In 1963, the Ba'ath Party coup provided another impetus for advancing peasant

rights. The party's radical leftist faction actively addressed the agrarian issue and implemented more equitable policies concerning irrigation management and water rights. During their rule, the construction of the Euphrates Dam was completed, fundamentally transforming Syria's agricultural economy. The initial attempt by this faction was to determine the distribution of agricultural income according to the shares of production factors. However, due to the complexity and diversity of these

factors and the absence of skilled economists among its cadres, this approach was later abandoned. This explains the lack of important data on agricultural and water economics during the early phase of Ba'ath rule, as well as the absence of reliable figures linking changes in land tenure to water resources and their utilization. Consequently, the intended goal of improving the conditions of the most disadvantaged peasants was not achieved. With the fall of the radical leftist faction at the hands of the Ba'ath military wing in 1970, agricultural policies became subject to political conditions. Between 1970 and the outbreak of conflict with the Muslim Brotherhood in 1976, these policies were lenient toward large landowners, allowing them considerable discretion over which properties they retained and overlooking the collection of other holdings in the form of legal cash sales. However, after 1976 and for the following decade, the situation reversed: pressure on large landowners intensified, including seizure and confiscation of private property, particularly in rebellious rural areas of Hama and Aleppo. Overall, the 1958 Agrarian Reform Law improved peasants' rights, but the ceilings it imposed on private landownership had only limited positive effects. These affected just 1.1% of landowners in Syria, who controlled more than one-third of the land under cultivation, while 1.9% of all leaseholders controlled a total of 35.3% of the rented agricultural land (Batatu, *op. cit.*). Large landowners were able to enhance their operations by investing in agricultural machinery, pumps, and irrigation networks, utilizing them in a capitalist manner. Due to conciliatory arrangements between these landowners and elements of power within Ba'ath state institutions, they were able to lease the most produc-

tive lands with stable irrigation systems, often bypassing Decree No. 88/1963<sup>14</sup> and later Decree No. 99/1965<sup>15</sup>. Lands distributed to peasants accounted for only one-third of the total holdings expropriated under this law, while approximately 18% were allocated to cooperatives and various ministries<sup>16</sup>.

Data indicate that the Agrarian Reform Law during the first three decades of Ba'ath military rule led to a decline in the number of wage-dependent agricultural laborers, accompanied by an approximately 20% increase in the number of self-employed peasants relative to the total population. This shift carried elements of injustice and reinforced class differentiation within the agrarian community itself, favoring landowning peasants over landless peasants and smallholders. It also contributed, in one way or another, to an inequitable societal shift by concentrating land ownership, water rights, and their use in favor of large landowners. The law's impact on land distribution varied across governorates: it was significant in Damascus and Quneitra, but weak in southern and coastal governorates. Moreover, even partial fragmentation of land ownership may have limited Syria's access to the global capitalist model characterized by asset accumulation and increased production, leaving the country lagging in terms of integration into the global market.

This shift reinforced state financial policies, with the state itself functioning as the Ba'ath authority. Agricultural credit in the country expanded, with the number of branches of the Agricultural Bank rising from 51 in 1974 to 71 in 1990 (Jumaa, 1991), and lending reaching its peak value of 8.79 billion Syrian pounds<sup>17</sup> in 2011. The

<sup>14</sup> This decree stipulates setting the area of land subject to investment by the investing farmer at 12 hectares for irrigated non-forested land and 6 hectares for irrigated forested land, while fixing ceilings for private ownership at 15 to 55 hectares for irrigated land and 80 to 300 hectares for rainfed land.

<sup>15</sup> This decree stipulates setting the area of land subject to investment by the investing farmer at 12 hectares for irrigated non-forested land and 6 hectares for irrigated forested land.

<sup>16</sup> Ministry of Agriculture and Agrarian Reform, *Agricultural Census Results 1970–1971*, (Damascus: 1972), p. 158.

<sup>17</sup> Central Bureau of Statistics, (Damascus: 2011).

increasing agricultural credit primarily benefited large landowners cultivating cotton and cereals, as well as investors in agricultural machinery, irrigation, and harvesting equipment. From the mid-1980s onward, fruit tree farmers also gained from this system. Investments in newly established irrigation systems in the northern Great River and Orontes basins provided regular and abundant water resources for orchards. However, the national-level implementation of irrigation systems through agricultural credit policies was often mismatched with the nature and characteristics of the country's agricultural lands.

One of the strategic mistakes of the Ba'ath agricultural policies was planning based on soil type. In practice, only about 4 million hectares of Syria's land have high-quality soils suitable for agriculture—namely alluvial, Mediterranean red, groundwater-dependent, and tramadol soils<sup>18</sup>. Agricultural credit encouraged expansion on these high-quality, well-watered lands at the expense of lower-quality soils, particularly in Syria's interior regions. This expansion into prime lands altered the balance of power in eastern Syria, where powerful tribal sheikhs seized large areas of lower-quality land between the Tigris and Euphrates rivers and in southern Syria—lands that had previously been largely ignored by the government. Grazing areas also expanded into the ecologically fragile steppe (*badia*). This shift later led to ecological degradation of the steppe and an increase in desertification, which was further exacerbated by recurrent droughts to catastrophic levels, as they altered vegetation cover and productivity (Zheng et al., 2024) and reduced biodiversity (Koelemeijer et al., 2023).

<sup>18</sup> Central Bureau of Statistics, Annual Statistical Collection for 1986, (Damascus: 1987), p. 29.

<sup>19</sup> OCHA. [Syria: Drought - 2021-2024](#)

# 06

## CLIMATE CHANGE

It is natural for climate conditions to vary from year to year, and it is evident that the Mediterranean region is experiencing a general warming trend (Mathbout et al., 2023). Data from the Syrian Remote Sensing Authority, based on records from climatic observatories in Syria and Turkey and from two global stations of the Global Historical Climatology Network (GHCN), indicate that drought periods<sup>20</sup> have occurred cyclically over the past 80 years, with the most severe episodes recorded during the last two decades. Syria was particularly vulnerable to extreme drought during the first decade of the twenty-first century, and this characteristic has since become quasi-persistent (Werrell et al., 2015; Gaznayee et al., 2022). This is consistent with the sustained warming trends observed since the mid-twentieth century across the Middle East as a whole (Donat et al., 2014; Burstyn et al., 2019). Climate model studies further project a continuous future decline in winter precipitation across the Mediterranean region (Zappa et al., 2015). Polade et al. (2014) observed that in most areas of the Mediterranean basin, changes occur in the number of dry days rather than in the average precipitation per rainy day, a factor that has significant implications for the intensity and impacts of drought. Overall, drought waves in Syria since 2010 have led to the degradation of

extensive areas of both rain-fed and irrigated agricultural land. These episodes are typically followed by wind erosion, with the area affected by this phenomenon estimated at approximately 25% of the total land area of the Syrian steppe<sup>21</sup>.

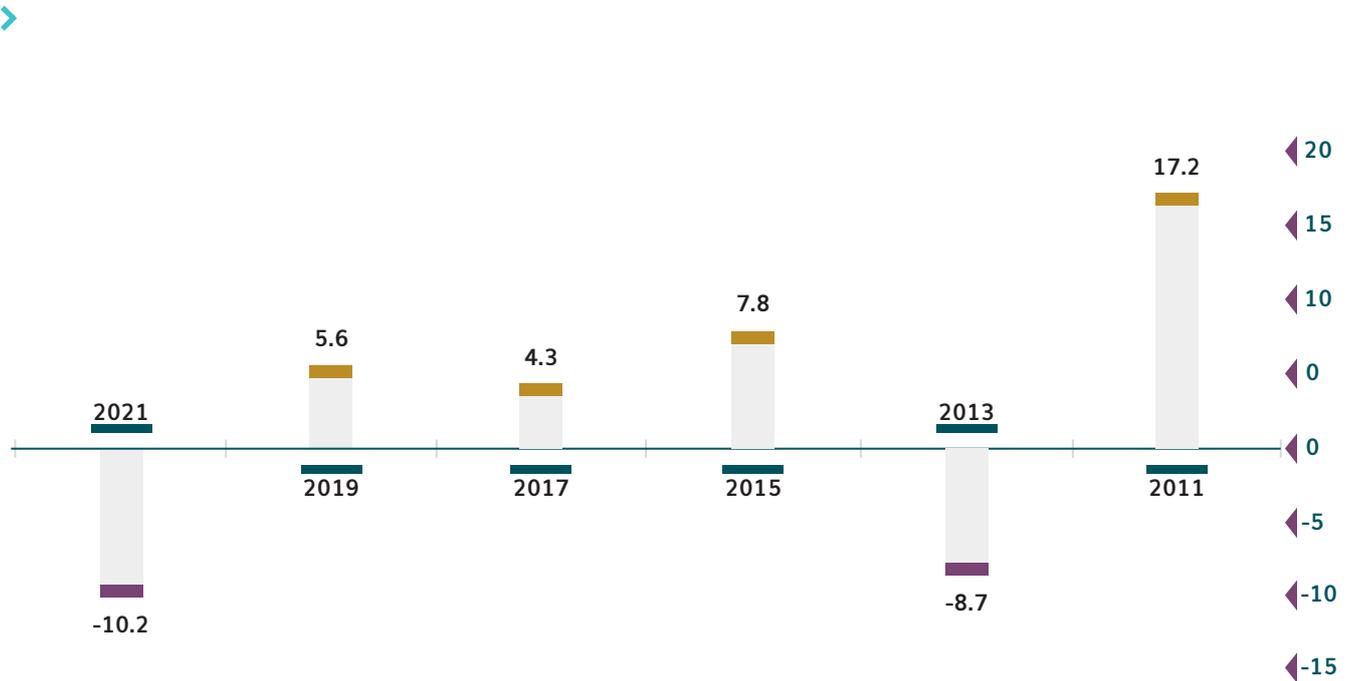
Persistent drought in Syria has resulted in substantial agricultural losses, with its impacts exacerbated by the interaction between climate stressors and conflict. Increasing drought has contributed to the transformation of semi-arid areas into arid zones (Mathbout et al., 2025), with pronounced effects in northeastern Syria, where desertification and declining agricultural productivity are evident (Dinc and Eklund, 2023). For the first time since the mid-1980s, and as a consequence of drought and agricultural policies, Syria halted wheat exports in 2008<sup>22</sup>—one year after the implementation of liberal policies referred to as the “social market economy,” which the current authority continues to follow. In 2024, harvested quantities declined to approximately 720,000 tons, while domestic consumption was estimated at about 3.8 million tons<sup>23</sup>. Over the same period, the share of agricultural production in Syria’s gross domestic product decreased from 17.2% in 2011 to –10.2% in 2021 (Figure 5).

<sup>20</sup> A drought period refers to a period during which rainfall, for a duration of three years, is below the normal average that had persisted over the previous one hundred years.

<sup>21</sup> Ministry of Local Administration and Environment, National Desertification Plan, Damascus, accessed on 8 August 2022, at: <http://www.mola.gov.sy/mola/index.php/legislation/461>

<sup>22</sup> the Impact of the World Economic Downturn on Syrian Economy, Inequality and Poverty, UNDP, 03-11-2009,

<sup>23</sup> Statement by Ahmad Hilal, Director of the Agricultural Affairs Office at the General Union of Farmers in Syria, to the German News Agency, 13 December 2024.



**Figure 5: The percentage of agricultural output in Syria's GDP. Source: Data from various years from the World Bank**

In 2025, rain-fed crops in the second and third stability zones were entirely removed from the production register, while crops in the first stability zone are expected, at best, to yield only about one quarter of their usual output<sup>24</sup>. This situation places the country in a state of dependency on food imports.

<sup>24</sup> Khaled Al-Turkawi and Abdelazim Al-Maghrabl (2024), The State of Major Agricultural Crops in Syria after 2010, Jusoor Center for Studies.

# 07

## THE IMPACT OF THE CONFLICT ON THE FUTURE OF WATER IN SYRIA

Surveys of the Syrian labor force conducted between 2001 and 2007 showed that, as a result of the neoliberal liberalization policies adopted by successive Syrian governments, 460,000 economically active individuals exited the workforce, representing a 33% decline in agricultural employment in Syria<sup>25</sup>, alongside an overall decrease in employment rates of approximately 36%<sup>26</sup> between 1975 and 2010. In the year following these adverse outcomes, the conflict in Syria erupted. Over the ensuing fourteen years, the conflict has produced catastrophic consequences for the country's water resources infrastructure. Owing to the continued use of aging and, at times, deteriorated water networks—often the result of funding shortages and security disruptions—the average loss of potable water is estimated at around 25% of total water pumped through distribution networks, rising to approximately 50% in Rural Damascus Governorate (Sawah and Slepnev, 2023). According to the Food and Agriculture Organization of the United Nations (FAO<sup>27</sup>), the conflict in Syria has inflicted extensive damage on agricultural and irrigation systems and infrastructure, with losses estimated at around USD 3.2 billion. This has rendered the country more vulnerable to natural disasters and regional crises, as was clearly demonstrated during the 2023 earthquake

and the temporary influx of displaced persons from Lebanon in 2024. Nevertheless, the current water crisis was not unforeseen. Profound changes in Syria's hydrology have been unfolding for decades as a result of mismanagement, climate change, growth in water demand, unsustainable water use, and increasing competition over transboundary water resources, in addition to the instrumentalization of water as a means—and a weapon—within the conflict among the warring parties (Daoudy, 2020; Gama, 2024).

Concurrently with the water crisis, climate change has driven desertification, increased the frequency of dust storms, accelerated soil degradation, and intensified forest fires and human encroachments upon forested areas, collectively contributing to widespread environmental deterioration. According to an in-depth study by Dr. J. Selby and his colleagues at the Department of International Relations at the University of Sussex, adverse environmental conditions have been identified as a key underlying factor in the armed conflict in Syria today. After fourteen years of war, environmental impacts continue to intensify as a result of both human activities and climate change. Between 2001 and 2023, Syria lost approximately 29.5 thousand hectares of tree cover<sup>28</sup>, equivalent to

<sup>25</sup> The UN Refugee Agency, (UN-HCR, 2011).

<sup>26</sup> Arab Development Challenges Report 2011, United Nations Development Programme, Second Edition, March 2013. p34

<sup>27</sup> Irrigation: A Top Priority for Agriculture, FAO, 2023, accessed on 2 February 2025, at: [Link](#)

<sup>28</sup> Ruba Jaafar, Environmental Impacts of the Syrian Conflict, Arab Reform Initiative, 7 April 2021.

a 28% reduction in tree cover since 2000. Due to ineffective water management, the absence or dismissal of qualified personnel, and the weakness of governmental institutions under both the former and current regimes, the state appears incapable of formulating solutions to these escalating problems. A report by the German Agency for Technical Cooperation noted that the absence of scientific research and the failure to develop specialized human resources aligned with the requirements of agricultural activity constitute a decisive factor in Syria's water management crisis. For example, the proportion of trained personnel remains negligible, while between 40% and 60% have not progressed beyond the lower secondary level of education. Even the most recent irrigation policy reforms approved by the Syrian government in 2013—the last modern reforms aligned with international standards—could not be implemented due to the dominance of de facto authorities, and the government failed to activate enforcement mechanisms for 140 water laws that had previously been drafted.

The absence of water strategies, and the failure to enact new laws regulating the right to water and its governance under pressure from the interests of agrarian capitalism, have led to tangible changes in water consumption toward the depletion of groundwater resources. This has occurred in parallel with a shift in agricultural production toward crops or products with higher economic returns. Syria currently exports many types of fruit and certain crops such as strawberries and cucumbers. These crops are irrigated, and some—such as fruit trees—require large quantities of water. Official statistics illustrate how agricultural production has shifted toward water-intensive crops.

Agricultural data between 2010 and 2021 show structural changes in cropping patterns driven by economic interests: the cultivated area of wheat declined from 1,599 thousand hectares to 1,567.3 thousand hectares, and barley from 1,527 thousand hectares to 1,440 thousand hectares. Meanwhile, the area planted with pistachio trees increased from 56.167 thousand hectares to 60.4 thousand hectares, apple orchards from 51 thousand hectares to 51.6 thousand hectares, orange orchards from 23.2 thousand hectares to 25.5 thousand hectares, and lemon orchards from 7 thousand hectares to 7.3 thousand hectares. The cultivated area of tobacco also increased from 1.9 thousand hectares to 8 thousand hectares. Under the current government, and more than six months after it assumed office, there has been a complete failure to implement production plans, manage irrigated lands, and modernize and expand irrigation systems due to weak financing and the absence of political participation among the various de facto power holders in the country. The general orientation of the current government is one of "liberal retrenchment." This began with the dismissal of experienced bureaucratic elites, the undermining of the security of peaceful agricultural communities belonging to minorities, and the growing dominance of armed factions over resource management in exchange for providing protection. Within this approach, instead of investment inflows compensating for weak gross domestic savings and being directed toward sustainable development sectors, the government has channeled them toward financing security expenditures and current accounts.

<sup>29</sup> State Planning Commission, Basic Water Sector Report, German Agency for Technical Cooperation for the Modernization of the Syrian Water Sector, (Damascus: 2009).

<sup>30</sup> Agricultural and Industrial Crops, Fruit Trees, and Citrus, Statistical Yearbook 2022, Central Bureau of Statistics, Damascus, 2023. udies.

# 08

## FRESHWATER AND HYDROPOWER

There are currently 154 dams in Syria, 110 of which were constructed during the period of Baathist military rule. All of them contributed to increasing agricultural production. With the outbreak of the conflict in 2011, investment in the construction of irrigation systems came to a halt, and their maintenance ceased. As the conflict in Syria has extended over a decade, irrigation systems and dams have begun to deteriorate and are no longer able to keep pace with the country's growing water needs. In addition, high surface evaporation rates from the three largest dams in Syria—whose combined surface area is approximately 873 km<sup>2</sup> and which store about 77.7 billion cubic feet of water—have resulted in the loss of around 2.2 billion cubic meters of water annually due to evaporation (Sottimano and Samman, 2022).

The Euphrates Basin contributes approximately 14 billion cubic meters out of a total freshwater storage capacity in Syria<sup>31</sup> of about 15.6 billion cubic meters. In May 2021, the flow of the Euphrates River in northeastern Syria fell to its lowest level ever recorded, triggering the worst drought since 1953. Months later, in September 2022, Hammoud al-Hammadin, director of the Tishreen Dam—one of the three major dams—warned of a historic and alarming decline in water levels, nearly 40 percent below the minimum agreed flow level of 500 cubic meters per second established

between Syria and Turkey in 1987. In February 2018, Ankara reduced the Euphrates' flow rate to 321 units (equivalent to 450 cubic meters per second<sup>32</sup>). In July 2022, the water level in the Tabqa Dam reached 302 meters, while the dead storage level should be 298 meters. The water level in the Tishreen Dam reached 322 meters, whereas its dead storage level is 320 meters.

As the Euphrates River is the primary source of irrigation water, drinking water, and electricity generation in Syria, this decline has affected all three vital sectors simultaneously. The reduction in the river's flow, combined with unprecedented droughts, has led to decreased electricity production and diminished supplies of potable water, thereby increasing water pollution levels in northern and northwestern Syria. According to the International Committee of the Red Cross, this pollution stems from three main causes. The first is war, which led to the destruction of wastewater treatment plants serving the cities of Aleppo and Damascus, resulting in sewage leakage and contamination of groundwater. The second cause is the absence of qualified personnel, as water facilities have lost approximately 30–40 percent of engineers and workers capable of carrying out proper maintenance of treatment plants. The third cause is electricity: the water system's infrastructure

<sup>31</sup> "Basic Water Sector Report and Modernization of the Syrian Water Sector" (GTZ), State Planning Commission, 2009.

<sup>32</sup> "Turkey Reduces the Flow Rate of the Euphrates River to Syria," Russia Today TV, 11 February 2018.

depends on power supply, and the decline in electricity generation has made the lack of electricity another driver of water shortages<sup>33</sup>. The concentration of pollutants in water discharged from dams, when combined with rising temperatures, algal blooms<sup>34</sup>, and evaporation, is likely to devastate aquatic ecosystems. This situation demonstrates that the Syrian government has lost control over the country's water resources. Moreover, numerous United Nations reports condemning mismanagement by Syrian authorities at various levels have been ignored, despite calling for urgent reforms to thirty-one dams in order to avert major failures—such as the collapse of the Zayzoun Dam in 2002 and the incompletion of the Baradoun Dam<sup>35</sup>.

<sup>33</sup> Syria: Difficulty Accessing Water for More Than a Decade, International Committee of the Red Cross, 2022, accessed on 6 December 2024.

<sup>34</sup> Hincks, J (2021). [How Syria's decad-long war has left a toxic environmental legacy](#). TIME.

<sup>35</sup> A dam under construction in the Northern Great River basin in western Syria. Its inauguration was expected in 2011, then postponed to 2021, then 2023, and it has not been completed yet.

# 09

## IRRIGATION AND GROUNDWATER

Intensive irrigation of high-yield crops, inefficient irrigation techniques, and the illegal drilling of wells have contributed to the deterioration of groundwater reserves. Moreover, as in all sectors of the Syrian state, corruption has permeated the structure of the agricultural economy. Even before the outbreak of the Syrian crisis in 2011, unregulated irrigation wells had multiplied several times, with unlicensed wells accounting for 55% of the total number of wells (De Chatel, 2010). This later caused severe damage to the aquifers of the Euphrates Basin and led to a drop in groundwater levels of approximately 100 meters compared to their levels in the 1950s (ibid). In response to the severe drought in 2025 affecting southern Syria and the capital, Damascus, the new authorities adopted a catastrophic measure, allowing the drilling of 100 wells in the areas of Al-Rabwa, Al-Qadam, Barada, and Jadida Yabous<sup>36</sup> this year, thereby threatening the collapse of the Barada groundwater basin, whose water level had already fallen after rainfall reached only 150 mm, compared to an annual average of around 507 mm. Modern irrigation systems are costly, and the state's reluctance to provide them to farmers has pushed them to invest in drilling wells or continue using traditional water-lifting methods<sup>37</sup>. Over-pumping and excessive water extraction have caused

the complete drying of many springs in Ras al-Ain on the Syrian-Turkish border, and the Khabur River has ceased to flow in the summer since 1999<sup>38</sup>. The ongoing drought affecting major water resources, such as the Khabur and Jagjagh rivers, has also contributed to the overuse of well water. Syrians continue to extract approximately 1.2 billion cubic feet (34 million cubic meters) of groundwater annually (Sottimano and Samman, ibid).

The findings highlight several factors contributing to the increase in well drilling, most notably climate change, declining surface water levels, lack of government regulation, and the high cost of modern irrigation systems. These results reflect global concerns about the impacts of climate change on water availability and the challenges associated with unregulated water extraction (Gupta et al., 2022). The rising costs of accessing water, its scarcity, and the absence of equitable water distribution pose significant social challenges to civil stability and have driven rural out-migration, underscoring the link between water resource management and livelihoods (Meinzen-Dick, 2019). Beyond agricultural production, the provision of safe drinking water is also threatened by scarcity and contamination. Drinking water is rationed throughout the country, forcing people to

<sup>36</sup> Damascus... Water Authority Announces a Rationing Program, Enab Website, 12 May 2025.

<sup>37</sup> For comparison, in the traditional method of drawing water, for every 7 liters taken by the farmer from the source, only 1 liter benefits the crop, whereas in the modern sprinkler system, for every 2 liters, 1 liter benefits the crop.

<sup>38</sup> United Nations Economic and Social Committee for Western Asia and Bundesanstalt für Geowissenschaften und Rohstoffe, Inventory of Shared Water Resources in Western Asia (Beirut: 2013).

rely on unsafe water sources or to pay for expensive private water delivery by truck. The shortage of treated water has serious public health consequences, frequently causing the spread of waterborne diseases such as cholera and hepatitis A<sup>39</sup>.

The sharp decline in water storage in the Tabqa, Tishreen, and Baath dams on the Euphrates River threatens irrigated agricultural production in Syria. The Food and Agriculture Organization (FAO) has sounded the alarm over declining crop yields. Recent studies conducted in Tunisia and Morocco highlight the link between plant health, drought, and its role in migration and conflict dynamics (Torkaman et al., 2024). Conflict and environmental pressures have disrupted agricultural cycles—both summer and winter crops—resulting in reduced production across all seasonal crops (Atik et al., 2024). In 2023 alone, the irrigation committee of the “Autonomous Administration” in eastern Syria documented approximately 25,000 dunums affected by salinization between Dhiban and Al-Shahil in the Raqqa region, rendering the land unsuitable for future cultivation<sup>40</sup>. Farmers are also forced to drill more groundwater wells in the absence of water laws and to sell livestock assets due to feed shortages and high costs<sup>41</sup>. While the relationship between climate and conflict dynamics is complex, evidence indicates that agricultural disruption is a pivotal factor (Ide et al., 2021). This deteriorating situation threatens to trigger a sustained wave of climate-driven migration from eastern, northern, and northeastern rural Syria toward cities, adding to the hundreds of thousands who have already left their villages due to drought in 2006, 2008, and 2010, the forced displacements during the Syrian war in 2013, 2015, and 2018, and the latest displacement in

March 2025 from rural areas of Latakia governorate. In examining the impact of the conflict, it is important to distinguish between “forced displacement” and “displacement and migration as an adaptive response by Syrian farmers,” across two distinct periods: droughts before 2010, and those occurring during the Syrian conflict from 2011 to 2025. The factors of water justice and rights, climate change, and drought as drivers of displacement vary clearly. Syrian farmers employed adaptive measures against drought before the war and largely remained in their communities, with forced displacement being temporary and geographically limited to certain areas of northeastern Syria. During the conflict years, however, displacement and migration became an adaptive response by farmers across the country, influenced by political and security pressures that exacerbated farm vulnerability and accelerated migration responses.

The foregoing accentuates the structural disparities between areas under the control of de facto authorities in Syria, particularly between regions governed by the central government in Damascus and those under the Autonomous Administration in eastern Syria, which are relatively better in disaster management, the quality and quantity of aid, and ease of cooperation with international organizations. Rural communities in western and northwestern Syria, meanwhile, continue to suffer vulnerabilities linked to their social conditions.

<sup>39</sup> IFRC, DREF OPERATION South Syria Droughts 2023, p2

<sup>40</sup> Sheikh Al-Tamlouh Salinity Destroys Agriculture on 23,000 Donums in Deir Ezzor, Enab Baladi, August 2023, accessed in September 2024.

<sup>41</sup> Feed Prices Rise Again, Al-Watan Syrian Newspaper, 6 February 2024, accessed on 8 November 2024.

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# 10

## WATER IN SOUTHERN SYRIA

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In a serious escalation, following the fall of the previous Syrian regime, Israeli occupation forces carried out a large-scale military operation in southern Syria, during which they occupied parts of Quneitra Governorate and seized control of the Kodneh Dam and the Mantra Dam—the latter being one of the most important water sources in southern Syria. This Israeli action represents a direct threat to Syrian water security and a violation of its sovereignty. Although, as of the writing of this report, occupation soldiers have not prevented farmers from working their lands adjacent to the dams, according to local residents, this situation is unlikely to continue in the future.

The Mantra Dam, located on the course of Wadi al-Riqad within the Yarmouk Basin, is critically important for local rural communities and their agricultural economy. It supplies the areas of Umm Batna, Umm al-Atham, western Samdaniya in Quneitra, and large parts of western rural Daraa. The dam has a substantial storage capacity, being the largest in the Yarmouk Basin, with an estimated water volume exceeding 225 million cubic meters, irrigating more than 21,000 hectares. Given the previous Israeli occupation of the upper slopes of Syria's Mount Hermon in the days following the fall of the regime, the future of water resources across all southern Syrian governorates—Daraa, Sweida, Quneitra,

and rural Damascus—is now under the influence of Israeli control.

Israel's current control over dams and water sources in southern Syria represents merely the latest episode in a long history of ambitions to dominate the region's water resources. Israeli interests in the Riqad Basin can only be understood within a broader historical context, which reveals a persistent colonial strategy aimed at controlling water sources in historical Palestine, Jordan, Lebanon, and Syria. Since occupying the Golan Heights in 1967, Israel has pursued a plan to exploit more than 95% of the Golan's groundwater, and a similar proportion of its surface waters, depriving the local population of access except to limited portions of the Jordan River, the Sea of Galilee, and Lake Ram. Tel Aviv has invested over half a billion cubic meters of Golan water through the construction and drilling of dozens of reservoirs, dams, and wells, supplying its settlements. Additionally, it has built dams specifically to divert some tributaries toward the Riqad Valley, preventing their waters from reaching the agricultural areas of rural Quneitra.

These policies are extremely dangerous, as they place the entire population of southern Syria under pressure to abandon their lands due to the loss of irrigation sources and the right to use them, undermining any prospects for peace and stabil-

ity in the country. This is likely to trigger a large wave of displacement and migration from southern Syria, placing the country at risk of losing water security and affecting sovereign decision-making through control over water, alongside other strategic factors beyond the scope of this study. Continued Israeli violations of Syria's water resources will undermine regional stability and increase the likelihood of future water-related conflicts.

# 11

## RESULTS AND RECOMMENDATIONS

The protracted conflict in Syria has significantly exacerbated the water crisis. Military operations between the country's de facto authorities have caused severe damage to water infrastructure, exposing water sources to depletion, pollution, mismanagement, and the erosion of equitable rights in their distribution, utilization, and governance. Climate change, with rising temperatures and recurring drought years, has further degraded water quality and quantity while intensifying inequities in access. These conditions have had serious repercussions on community development and livelihoods, in addition to causing the deterioration of agriculture, ecosystems, and water security—all urgent problems that the current authorities, due to structural weaknesses, are unlikely to address effectively. For a detailed presentation of the findings of this report, see Annex (1).

The relationship between water, farmers, and authority has historically been shaped primarily by issues of ownership rather than the right to water. However, the latter has been a decisive factor in the evolution of ownership. It can thus be argued that a historical interactive pattern emerged, in which both the "right to water" and the "development of means of production" determined the structure of agricultural ownership in Syria. This structure, in turn, has played a critical role in shaping state policies—whether through administrative

mechanisms aimed at extracting economic benefits from ongoing conflict dynamics, or through an economic model based on the gray or shadow economy, which has significantly undermined the role of productive institutions. Currently, there are indicators that the new authorities are not fundamentally different from their predecessors. The failure to implement participatory solutions based on political inclusion in development plans, agricultural ownership, and the governance and rights of water at the national level will inevitably perpetuate the existing dynamics of a conflict-driven economy. The greatest damage from this dynamic will be borne not only by peaceful rural communities but also by ecosystems and water systems, both in terms of infrastructure and the degradation of their essential characteristics. Accordingly, a number of recommendations presented in this report may be useful, centered around three main areas.

A Critique of Neoliberal Policy on the Issue of the Right to Water: There are no economic propositions in the discourse of the Syrian government—whether through statements by its officials or via official institutions—that are based on investment in human beings and the environment. Rather, its discourse remains theoretical and bears no relation to successful economic experiences in developing countries, nor to the experiences of comparable

states that have emerged from prolonged conflict. The perspective of the current authority suffers from profound structural deficiencies in its propositions, the most significant of which can be summarized in four principal points: the distortion of public institutions, food dependency, and the nature of labor. Accordingly, the first recommendation centers on rebuilding the institutions concerned with water and irrigation by establishing clear and transparent accountability mechanisms or controls to evaluate the plans adopted after institutional integration, assessing their alignment with the growth of social capital, and determining the extent of their linkage to the modernization of the legal and administrative framework governing water in Syria, as well as to the construction of a developmental economy based on knowledge and environmental sustainability.

**Food Dependency:** One of the most dangerous and socially costly consequences of the Syrian conflict is dependence on food imports. This factor places increasing pressure on the central bank's foreign currency reserves. While the impact of climate change cannot be denied, it accounts for only part of the explanation, as the country has long enjoyed—and continues to enjoy—conditions conducive to an agricultural revival. Accordingly, the Syrian government must link the agricultural economy with the regulation of irrigation and water rights in a manner that sustains Syrian society. This must be undertaken within a carefully designed development strategy, presented to representative councils, that preserves a fair space for labor, connects the labor market to green jobs, and promotes development based on environmental solutions. No strategy can succeed without a comprehensive re-examination of the agricultural issue as a whole,

grounded in an understanding of the role and importance of the right to water—its quality, its equitable distribution, and its classification as a national resource.

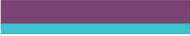
**Water Colonialism:** The cycle of the agricultural economy in the country reveals a new form of colonialism linked to the nature of food exchanges to and from Syria, striking at the very core of the right to water and its governance. At present, the primary partners in agricultural exports are large commercial and capital-driven export companies whose activities concentrate on water-intensive fruits and vegetables, as well as, indirectly, livestock and meat products that are likewise highly water-consumptive. Exporting these goods implicitly entails exporting the water consumed in their production, a phenomenon known as "virtual water." As water scarcity in Syria continues to deepen, agricultural capitalism drives vast tracts of arable land toward water-intensive crops tailored to external markets. Consequently, the country's representative councils—parliament and agricultural unions alike—must work to enact more equitable water laws, to develop entirely new concepts of the right to water and its governance, and to present clearer and more transparent binding agreements governing investment laws related to water.



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## ANNEX

The relationship among water, the peasant, and authority has been defined primarily by the form of ownership rather than by the issue of the right to water. Yet the latter constitutes a decisive factor in the evolution of ownership itself. Accordingly, it may be argued that a historical interactive dynamic, through which both the “right to water” and the “development of the means of production” converged, came to shape the contours of agricultural ownership. This, in turn, played a decisive role in influencing the policies of authority, which subsequently subsumed the state—whether through administrative mechanisms that exerted pressure to extract economic gains for the continuation of the machinery of domination, or through an economic model rooted in war economies and their subsequent impact on the erosion of the role of productive institutions. At present, there are indications that the new authority is reverting to the practices of its predecessor. The failure to devise participatory solutions grounded in political participation within development plans at the national level will inevitably lead to the persistence of the current dynamics of the war economy. The greatest harm inflicted by this dynamic will be borne not only by peaceful rural communities, but also by ecosystems and the water system as a whole, whether in terms of infrastruc-

ture or the degradation of its fundamental characteristics. One can discern the current government’s inclination toward the centralization of power, monopolization of decision-making, and the confinement of state institutions’ roles within the framework of loyalty to authority. This stands in direct contradiction to the country’s urgent need for participatory approaches to solutions and for a transition from a war economy to a post-conflict economy, necessarily founded on three pillars: a transparent institutional system, community-based development and the elimination of inequality, and political participation. From this perspective, there must be an awareness of the importance of addressing the issue of the right to water and the impacts of climate change across three additional levels: participatory approaches to environmental and water sustainability solutions, ecosystem-based adaptation, and social solidarity. Yet none of the above will prove effective without achieving a profound transformation in the country’s political governance. It is therefore essential to understand that safeguarding water security, the right to water, and its governance is inextricably linked to a political solution for Syria grounded in political pluralism and the principle of the peaceful transfer of power.

## CRITIQUE OF NEOLIBERAL POLICY ON THE ISSUE OF THE RIGHT TO WATER

There are no economic propositions in the discourse of the current official author-

ity—whether through statements by its officials or via formal institutions—that

are based on investment in human beings and the environment. Rather, its discourse remains purely theoretical and bears no relation to successful economic experiences in developing countries, nor to the experiences of comparable states emerging from prolonged conflict. The perspective of the current authority suffers from profound structural deficiencies in its propositions, the most significant of which can be summarized in four principal points: the distortion of public institutions, food dependency, and the nature of labor.

**Distortion of Public Institutions:** The new authority has dismantled the historical framework governing the agricultural and water sectors upon which the authoritarian state bureaucracy of the former regime was built, and within which vast accumulations of expertise had been institutionalized in two long-established and effective ministries: The Ministry of Agriculture and the Ministry of Irrigation. Under the current government, the Ministry of Irrigation has been merged with the Ministry of Oil and Electricity. This merger was carried out without an assessment of Syria's developmental needs or of the sensitivity of the water issue, and without establishing clear and transparent accountability mechanisms or regulatory frameworks to evaluate post-merger plans, their alignment with the growth of social capital, or their connection to the modernization of the legal and administrative structures governing water in Syria. These practices reinforce the assumption that the future of Syria's economy will be a continuation of that of the former regime—namely, an economy of violence predicated on the persistence of conflict, rather than a developmental economy grounded in knowledge and environmental sustainability. Within this context of institutional distortion, investment

in the development of irrigation systems and in the achievement of water justice and its governance, as a legal and regulatory framework, becomes unfeasible for several reasons. Chief among these is the long period required to recoup returns, which is incompatible with the interests of rapid neoliberal investment. Additionally, the distribution and fragmentation of water resources among *de facto* powers, each pursuing its own calculations that do not necessarily align with the public interest, further undermine coherent governance. Finally, transboundary water disputes with neighboring countries—whether through occupations in the south by Israel or through non-compliance with international law, as in the case of Turkey—are likely to exacerbate Syria's water crisis.

**Food Dependency:** One of the most dangerous and socially costly consequences of the Syrian conflict is dependence on food imports. This factor places increasing pressure on the country's already scarce foreign currency reserves and further constrains the financial resources available for investment expenditures. Since 2021, Iraq and Syria have ranked second and sixth, respectively, among the world's largest importers of flour. Dependence on flour, rather than unprocessed wheat, is particularly prevalent in countries affected by conflict within the region and beyond, underscoring the severe damage inflicted on local milling production. How did Syria's situation shift from export to import? While the impact of climate change cannot be denied, it accounts for only part of the explanation, as the country has long possessed—and continues to possess—conditions conducive to an agricultural revival. This reversal revolves around two principal factors that have now come sharply into focus, both of which represent extensions

of the former regime's policies. First, the political system in the country has effectively ceased to regulate agriculture in a manner that feeds Syrian society. As demonstrated in the full text of this report, the ruling Baath Party once invested heavily in agricultural organization and in the redistribution of land, wealth, and services in favor of peasants through the Agrarian Reform Law and its amendments, a process that ultimately led to food self-sufficiency. However, beginning in the 1990s, and then abruptly from 2006 onward, this trajectory was completely reversed when the Dardari government adopted radical neoliberal reforms in the agricultural and water sectors. Today, the outcomes of this liberal shift are clearly visible: a country that was a wheat exporter less than a quarter of a century ago now expends a substantial portion of its foreign currency reserves on food imports, particularly flour.

This does not mean that Syrians have ceased farming; rather, it simply indicates that the state has pursued misguided policies toward the agricultural sector, in addition to its handling of the right to water and its governance—this being the second key point. Since the outbreak of the conflict, Syria has moved toward promoting exports with higher added value. This report demonstrates significant shifts in water use toward the depletion of groundwater resources, in parallel with a transition to crops or products with higher economic returns. For example, tobacco production in Syria increased between 2010 and 2021 by rates of (+321.1%) in 2012 and (+373.7%) in 2024. This dramatic rise is attributed to the role of agricultural capitalism and the mafia of illegal tobacco manufacturers, and to their influence over decision-makers within government institutions. Syria is currently an exporter of

various fruits and certain crops, such as strawberries and cucumbers. These are irrigated crops, some of which—particularly fruit trees—require large quantities of water. This strikes at the core of efforts to resolve the country's water crisis and highlights the absence of equity in water distribution. Under the current conditions, the right to water is effectively allocated in favor of agricultural capitalism—the commercial partner of water-intensive producers—rather than to the agricultural community as a whole. Ultimately, this situation represents a losing bargain for the state, as the total value of exports of water-intensive fruits and vegetables never equals the cost of importing flour and cotton into Syria, commodities that are far more deserving of a substantial share of the country's water resources.

**The Form of Labor:** This is a critically important issue given the high levels of poverty within Syrian society, as indicated by converging United Nations and government statistics. Its significance stems from the country's pressing need for labor in the reconstruction process, particularly in the irrigation and water sectors. Nevertheless, the majority of competent bureaucratic elites have been dismissed from senior positions on sectarian or political grounds. The government is now moving toward a neoliberal model of labor, marked by a shift from permanent contracts to precarious and unregulated forms of employment, accompanied by a general deterioration of working conditions. Labor arrangements in the water and irrigation sectors—whether in their legal, administrative, or developmental dimensions—are being designed according to a logic of informality. In other words, employment in this sector is gradually being transformed into unregulated labor characterized by unsafe working

conditions, alongside an extremely alarming decline in the role and participation of women<sup>42</sup>.

A carefully designed development strategy aimed at maintaining a fair labor space, linking the labor market to green jobs, and fostering development based on environmental solutions is entirely absent, as is any conception of a comprehensive reconsideration of the agricultural issue—particularly one grounded in an understanding of the role and importance of the right to water, its quality, equitable dis-

tribution, and classification as a national resource. Even the literature emphasizing environmental stewardship and the recognition of humans and nature as coequal in human development and social welfare is entirely absent from the discourse of the new Syrian government. The adoption of this incomplete model, which fails to grasp the relationship between humans, the environment, and water, combined with the lack of political participation, will inevitably drive the proliferation of poverty and an increase in social inequality.

## THE POLITICAL ECONOMY OF CONFLICT

The economic model currently promoted by the Syrian authority is ill-suited to advancing development in the agricultural, water, and environmental sectors. National wealth is planned and managed in a fragmented manner, with an emphasis on direct investment in nonrenewable resources, such as oil, and on rentier revenues, including taxes. There is a complete absence of investment in renewable resources—nature, water, and education

as sustainable assets. Equally absent from the current government's agenda are considerations of immeasurable yet crucial issues, such as social solidarity, institutional trust, ecosystem-based adaptation, and the right to water. In light of the above and within the broader context, the overall value of the country's wealth is deteriorating, even in comparison with the period of the previous regime, for two principal reasons: divisions and water colonialism.

### ■ DIVISIONS

As a result of the division of administration and governance in Syria between de facto authorities, and the current government's rupture with the achievements of the previous era, fundamental questions regarding the right to water, its management, and its use in development have been lost. The question that must be posed today is: Do the Syrian government's investment programs prioritize water and environmental issues and their impact on the social and economic processes of the state? Do they genuinely recognize that environmental stewardship and the right to water, along with its governance, are

inseparable from human development and social welfare? The performance of government institutions indicates the absence of attention to these questions, as evidenced by:

» A large portion of investment expenditures intended for the development of the water, agricultural, and environmental sectors has been diverted to the security apparatus as recurrent spending. For example, security personnel salaries are paid on schedule, while the infrastructure of irrigation facilities in numerous regions

<sup>42</sup> Maysa Saleh, *The Absent Image: A State Reshaped Without Women, Authority, and Structural and Symbolic Violence Against Women in Syria*, Al-Jumhuriya website, March 22, 2025. See also: Manhal Al-Sahwi, *Who Intentionally Excludes Women from the Public Scene in Syria?* Daraj website, March 25, 2025.

remains completely nonfunctional due to the absence of financial allocations. In addition, substantial resources are allocated to a specific elite that is practically unproductive and informal, such as irregular armed factions (the Hamzat and Amshat groups), which resemble the Baath brigades of the previous regime—both of which were responsible for entrenching war economy dynamics. There is also a general trend toward the recentralization of wealth in successive stages, the early signs of which are now emerging in sectors of quick-rent extraction benefiting a new elite. This context will produce significant social and value-based transformations. In a historical perspective on the peasant and authority, as presented in this report, the greatest burden of these transformations will fall on peaceful agricultural communities in remote areas and minority regions, manifesting as acute social class disparities and geographically uneven development.

» **Lack of Transparency and Integrity:** While it is widely acknowledged that the deterioration of agricultural communities across Syria has been caused by harsh climatic and environmental factors, this is distinct from the absence of feasible strategies to adapt to these conditions, improve water management and utilization, and sustain environmental resources. The combination of climate change, poor local governance, competition among de facto powers in Syria, and regional conflict constitutes more than sufficient reason to place water issues at the forefront of the new government's agenda. Continuous and comprehensive reform of water policies, directly

or indirectly addressing inequality and social disparities, is essential for strengthening civil peace in the country. The contradictions in public statements by current officials, coupled with their ongoing inability to resolve any issues related to water, agriculture, or environmental concerns, are increasingly fueling public suspicion and eroding societal trust in state institutions. As with the previous regime, mechanisms for wealth appropriation remain largely intact, operating through the seizure and expropriation of state property. For example, following the Latakia massacres in March of this year, communities refrained from taking initiatives out of fear of targeted killings. Electrical transformers for drinking water pumping stations in numerous villages and towns in rural Latakia were stolen by factions affiliated with or close to the authorities and transported to Idlib openly and without accountability. Minorities in western and central Syria are repeatedly pressured to sell their properties at undervalued prices. This situation is intensifying in areas bordering Idlib province. Currently, peaceful agricultural communities in much of rural Latakia, Hama, and Homs face severe threats due to insecurity, looting, and the encroachment of nomadic herders onto farmland, often forcing complete abandonment of the land<sup>43</sup>. In interviews with farmers, it was reported that the herders burn forests and natural habitats in the coastal mountains in preparation for settling there with their flocks under the protection of the new authorities. This poses a grave threat to both the natural environment and the cultural identity of the coastal mountains. According to Mudar Sal-

<sup>43</sup> The Spread of Armed Groups in the Ghab Plain Threatens Agricultural Security Amid Increasing Attacks on Crops," Syrian Observatory for Human Rights, April 2025

ima, an environmental researcher, "If urgent measures are not taken in this regard, the fate of the coastal mountains will mirror that of the Tadmurian mountains in central Syria." A survey conducted by the author in collaboration with the organization "Gran Green" highlights the deep concern and fear among farmers regarding the severe security situation in western Syria.

» Inequality between governorates: Investments and capital are currently being redirected to certain governorates over others. For example, production tools related to agriculture and water infrastructure logistics are being imported and concentrated in governorates such as Damascus, Idlib, and Hama, while other governorates, such as Latakia and Quneitra, are

being largely marginalized.

» Absence of any plans to address the issue of agricultural land fragmentation, and its risk to the entire agricultural economy: Currently, the agricultural reform laws, following the expulsion of elite personnel from the Ministries of Agriculture and Irrigation, leave the new staff unable to devise practical and contemporary methods to resolve this intractable issue. They will also be unable to do so due to its association with the democratic discussions of representative councils, which the government has banned and instead linked to the management of political affairs under the Ministry of Foreign Affairs, functioning in a role similar to that of the Ba'ath Party under the previous regime.

## ■ WATER COLONIALISM

The agricultural economy cycle in the country reveals a form of neo-colonialism linked to the nature of food exchanges to and from Syria, which directly impacts the right to water and its governance. Currently, the main partner for agricultural exports is the Gulf Cooperation Council (GCC) countries. This significant economic and demographic power continues to benefit from Syria's water resources, manifested in water-intensive food products. In this commercial narrative, Gulf private companies are expected to indirectly consume Syria's water through the cultivation of water-intensive fruits and vegetables, as well as water-intensive livestock and meat products. Exporting these products implicitly means exporting the water they consumed, referred to as "virtual water<sup>44</sup>". The absence of community development projects for Syria's agricultural communities,

already suffering from climate stress and drought, reflects the catastrophic future outlook for the country. While Syria scrapes together salaries for its employees from one of the Gulf countries and imports flour for bread consumption, Syrian agricultural capitalism drives the bulk of arable land toward water-intensive crops for export to the food-thirsty Gulf market. This occurs smoothly and without legal regulation due to the lack of integrity and transparency in the relevant Syrian institutions, exploiting groundwater, irrigation, and watering systems without regard for the interests of the agricultural community.

Despite the fact that Syria's trade balance earns a few million dollars annually from these water-intensive exports, they are considered marginal in terms of the country's overall trade revenue. In contrast,

<sup>44</sup> These are the 'hidden' waters in the goods and services that people buy and use daily. They are often unnoticed by the end user of the product or service. These are waters consumed throughout the value chain, usually unnoticed by the final consumer, yet essential for making that product or service possible

these crops generate wealth for those who export them, along with power and corruption. With the absence of state institutions issuing entirely new water laws and developing completely new concepts for the right to water and its governance, this right in Syria will remain violated in favor of local agricultural capitalism and multinational Gulf companies, whose investments the current regime, like the previous one, is keen to attract, representing a new form of colonialism.

The practices of neighboring countries sharing water resources with Syria can be considered within this context. Syria's water resources rely heavily on transboundary rivers such as the Euphrates, Khabur, Orontes, and Yarmouk, which originate in neighboring countries. Therefore, it is essential to engage in diplomatic efforts with Turkey, Lebanon, and Iraq to ensure fair water-sharing rights through binding agreements, establish joint mechanisms to monitor water flow and quality, and call for international mediation in case of disputes. This report also highlighted Israeli practices regarding the waters of southern Syria and their threat to the Syrian people, which can likewise be classified as a form of colonialism imposed by military force. Additionally, water facilities in the northeast continue to face deliberate targeting by Turkey, particularly around the Tishreen Dam. Nevertheless, Syrian authorities and local communities should treat water resources as a means for dialogue, establishing water justice and governance in favor of community resilience and peacebuilding.

We personally believe that the water crisis in Syria, which the country will face catastrophically in 2025, will be the driving force pushing everything toward collapse. A new political culture is required, based

on organizing and governing the state according to an institutional system, viewing the state as the "institution of institutions," through which optimal use of the available (already limited) resources can be determined, and the correct framework for achievable strategies can be established. We assert here that, in one way or another, the water issue will be of utmost importance to Syrian society in the future. Water security and its justice are closely linked to the political contract and the quality and effectiveness of the institutional system. If we approach the current situation and project it onto the near future, we find that Syria will lose its water security due to political decision-making remaining monopolized by a single political direction, and Syrian institutions remaining burdened by the absence of participation, transparency, and integrity.



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