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# BEYOND SCARCITY: SOCIAL INEQUALITY AND THE POLITICS OF WATER IN MOROCCO

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## About the Author

Zakaria Ibrahimy is a Professor of Sociology and Anthropology at Cadi Ayyad University in Marrakech, Morocco. He is also a founding member of the Awal Center for Contemporary Studies and an expert on resources, kinetics, and gravity. Zakaria's interest in the environment, the ecological crisis, and green movements has led him to publish "Michaut Belaire," "Does Morocco have green movements?," and "Health and Society" with various publishing houses. He is currently co-writing "A beginner's guide to environmental sociology: concepts and approaches."

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Cover photo: Morocco – The Sebou-Bouregreg interconnection project's pumping station, enhancing water resource management between the Sebou and Bouregreg basins, 2023.

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## Introduction

Water in Morocco is a political issue, as it is in most human societies, but it also presents itself primarily as a cultural and social one.<sup>1</sup> The history of Moroccan society and the structure of its social and cultural institutions can be unreservedly characterized as shaped by water. This is due to facts confirmed by historical texts on Morocco, which document, for example, conflicts between Moroccan tribes over water, pastures, and all water-related resources.<sup>2</sup> Others reveal the position of water in the policies of the Moroccan state throughout its history. Writings on the history of famines and epidemics also showed the role that water played in the demographic, social, cultural, and political changes that the country experienced throughout its history after each drought year.<sup>3</sup> Perhaps this is what prompted General Lyautey, one of the founders of the French Protectorate, to say, “To rule in Morocco is to rain.” Researchers on Morocco’s political affairs, including Rémy Leveau, draw attention to the role that water played in establishing and legitimizing governance in Morocco.<sup>4</sup> Equally, historian Abdallah Laroui revealed the succession of political unrest in Morocco after each drought year.<sup>5</sup>

The issue of water in Morocco is not and has never been a natural one. Rather, it has always been a public and collective issue, one that has shaped and organized most Moroccan institutions and through which social inequalities have emerged. This is why many Moroccan researchers did not find it awkward to distinguish between state water and community water, between sacred water and ordinary water, between water of God and water of the state, etc. These binaries emerged historically through the water policies adopted by Morocco from at least 1914 until today following the introduction of the first law under the French Protectorate, which refers to state ownership of water and natural resources

and prohibits all forms of collective ownership by tribes, groups, and individuals who historically considered water to be the property of the group and an integral part of its identity and social organization, and have collectively built systems, sites, and authorities to regulate water and its distribution and to settle conflicts over it.

Water has been used in the contemporary Moroccan state as a direct source for building the legitimacy of the political system, legitimizing some of the economic and political choices on which the post-independence state was built, penetrating political elites, and excluding others from any political ambitions.<sup>6</sup> Therefore, the political economy on which the post-independence state was built, which favored agriculture and ensuring food security in a society living under an accelerated demographic transition, put in one way or another water and water-related policies in a central position.

This paper seeks to uncover the political character of water in Morocco, and how discourses on water have evolved in recent decades, moving from a discourse of abundance to one of scarcity, from the water of God to the water of the state, of the community, and of the engineer, as well as the transformation of water within the current public space into a resource for struggle, protest discourses, temporary waves of discontent, and one of the key elements of contestation in various Moroccan spheres.

## Morocco’s Water Situation: From Stress to Scarcity

Most national and international reports on water in Morocco point to the alarming situation due to the critical decline in surface and groundwater reserves and the decrease in the country’s water resources as a result of severe climatic changes. These have resulted in successive years of drought and high temperatures, which caused structural demographic and social shifts and led to the adoption of water-depleting political and economic choices that began with Morocco’s independence and continue to this day with the Green Morocco Plan.

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1 The social distribution of water in Deraa can be traced back to Monnet d’Agen’s writings on the social distribution of water in Deraa, and to Boudjemaa Royan’s *Colonial Medicine in Morocco* for his references to hammat.

2 Jacques Berque, *Structures sociales du Hautes Atlas*, PUF, 1978.

3 Mohamed Amin Elbazzaz, *History of Famines and Epidemics in Morocco in the Eighteenth and Nineteenth Centuries*, published by the Faculty of Arts and Humanities, Rabat.

4 Rémy Leveau, *Le Fellah marocain défenseur du trone*, Presses de Sciences Po, 1976.

5 Abdallah Laroui, *The Complete History of Morocco, Part II, Arab Cultural Center*, 1999.

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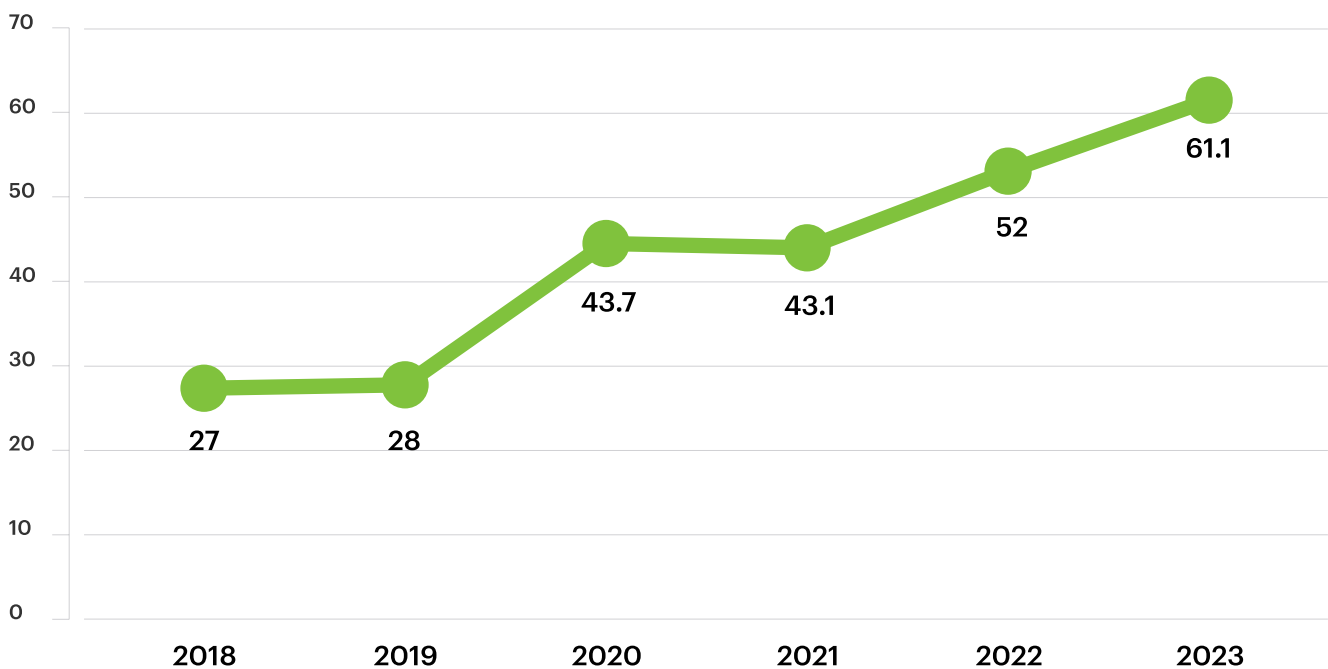
6 Morocco’s dam policy, the distribution of reclaimed land, and the triumph of agriculture as a vital sector over industrialization in post-independence Morocco are examples of this.

## 2 Beyond Scarcity: Social Inequality and the Politics of Water in Morocco

Between 1960 and 2023, per capita water use dropped almost five times, from 2,500 cubic meters in 1960 to less than 600 cubic meters in 2023, and is expected to fall below 500 cubic meters per year in 2030. According to Morocco's Economic, Social, and Environmental Council, the country is at risk of losing 80% of its water resources in the next 25 years. The World Bank classifies Morocco "among the water-scarce countries and the newly water-scarce countries of the region –

countries that are above the absolute limit of water scarcity of 500 cubic meters per capita per year and are middle-income countries. This group includes five countries: Iraq, Syria, Egypt, Egypt, Iran, and Morocco" (World Bank Group, 2023, p. 15). The World Resources Institute categorizes Morocco as a country with high water stress which is threatened with thirst in the coming decades and a high risk of water depletion in many areas.

Chart 1: Dam Filling Rate in Morocco



Source: Compiled from the daily bulletin of Morocco's dams, Water Directorate, 2023

Away from reports that present a general picture of the water situation in Morocco and reveal the significant and continuous decline in its water resources, Morocco's water stocks in recent years clearly reflect the acute scarcity of water resources. The percentage of water collected in dams has fallen by more than half, as the filling rate of Moroccan dams decreased between 2018 and 2023 from 61.1 percent to 29.1 percent, while the percentage of water collected in the dams has decreased by more than half. These general percentages hide many details that reflect the great inequality in the distribution of water resources between the north, center, and south; between regions where agricultural investment and export-oriented agricultural production are expanding; and between regions with a high population density and others with a lower one. Data provided by the Water Directorate of the Moroccan Ministry of Equipment and Water shows that some dams have lost more than 80% of their stocks in just one year. For example, the Oued Zat Dam went from 100% full in 2022 to

only 20% full in 2023. The concentration of rainfall in small areas of Morocco makes matters worse. According to official data presented by Moroccan Prime Minister Aziz Akhannouch in parliament, 50% of Moroccan rainfall is concentrated in only 7% of Morocco's area, meaning that more than 90% of the entire country receives only 50% of the rainfall, which is often unevenly distributed among regions. This inequality in the natural distribution of water resources is evident among the population. According to Akhannouch's statement in the Moroccan parliament in May 2022, the per capita share of water in some regions reaches 1,000 cubic meters per year, while in others it drops to less than 100 cubic meters.

The phrase "alarming situation" used by a constitutional institution, the Economic, Social, and Environmental Council,<sup>7</sup> and other statements issued at different times by

7 National Human Rights Council, Right to Water Memorandum, 2022.

political officials in Morocco are sufficient to describe the water situation in the country.<sup>8</sup> However, these descriptions often obscure many of the facts that led to this situation, since official rhetoric pegs all responsibility for the transformation of the water situation in the country on climate change and the water of the sky – to use Anne-Marie Jouve’s phrase.<sup>9</sup> The role played by major political choices, from independence up till now, in the depletion of water resources and the unequal distribution of water between individuals, groups, and sectors, has often been obscured.

The hegemony of epistemocratic discourses is characterized by the state’s control over the production of knowledge about the environment, water, and natural data in general. This hegemony stems from the state’s control of public discourse and its monopolization of power over water. It relies on its use of concepts that make water a natural issue resulting from climate change. These concepts include “global warming, decreasing snowfall, rising temperatures, successive droughts, evaporation, extreme weather events, demographic transition, and increasing urbanization.” This hegemony is understandable from the state’s control of public discourse and monopolization of power over water, as long as it obscures, for society at large, the impact of the state’s political and economic choices that have contributed to the water impoverishment the country is experiencing today.

## State Water and Ecological Authoritarianism in Morocco: A Critique of Natural Water

For most people, the environment and all its associated elements (climate, water, air, land, rain), and all its threats (climate change, pollution, global warming) provide the only legitimate record of knowledge of environmental phenomena

8 In a parliamentary session on January 2, 2024, Morocco’s Minister of Equipment and Water, Nizar El Baraka, described the water situation in Morocco as difficult, linking climate change to the increase in temperature in Morocco by almost two degrees, revealing that water imports declined from 12 billion between 1945 and 2013 to 5 billion 200 million cubic meters between 2017 and 2023, and 3 billion 200 million during this year, and estimated the decline in water resources at 67%.

9 Vandana Shiva, *Qui nourrit réellement l’humanité ?* Trans. Amanda Prat-Giral, Actes Sud, 2020 pour l’édition française.

of all kinds. They are often addressed in the public sphere only as phenomena that concern nature, divorced from the social, political, economic, and cultural realities in which individuals and groups live. However, the political authority’s comfort with and use of this type of discourse increases its legitimacy in the public sphere and public discourses on the environment, the ecological crisis, and climate change.

Water appears in this type of discourse as a purely natural phenomenon, and only as a chemical substance, two atoms of hydrogen and one of oxygen H<sub>2</sub>O, acting in and with the natural world, evaporating, dissolving, melting, and being absorbed. Does water, presented by hydrologists as a colorless, shapeless, and tasteless substance in the social world, appear as such? Or does it have other properties in the social world that give it color, shape, and taste?

Moving away from this kind of epistemocratic discourse that is based on ecological authority and a will to truth in the production of knowledge<sup>10</sup> about water reveals another life for water than the one in which natural scientists and engineers have tied it, another reality far from “two atoms of hydrogen and one of oxygen”, and different from the naïve naturalism that explains water by water.

Water is not completely natural. According to Pierre Lascoumes, nature itself is not innocent. If we replace the concept of nature with water, ecological power, as we live and perceive it, is nothing but a social construction. Based on this understanding, French researcher Anne-Marie Jouve presented a distinct classification of the three types of water in Morocco: Sky water, state water, and private water. Sky water, or God’s water, refers to the natural cycles of precipitation. This includes rivers, valleys, rainfall, snowfall, and springs. These resources have been owned and utilized by humans throughout history. State water, on the other hand, is associated with resources, institutions, policies, and laws. The state controls its production and distribution through specialized equipment. This is where water turns from a natural resource to a political resource. Its scarcity or availability depends mainly on the state’s production and distribution policies. Private water includes facilities owned by individuals or companies; they utilize it for their own individual or commercial needs.

Absent from Jouve’s classification is the fourth type of water, which is sacred water, through which some communities live out their founding myths, and use it for purposes that go

10 We use the concept here in the sense that Foucault uses it in the discourse system, which based on the monopolization, control, and organization of knowledge according to the priorities, limits, techniques, and areas of what is allowed and possible, in order to de-socialize and de-politicize water, presenting it as a natural substance that, even when we refer to its scarcity, pollution or change, is affected by data outside the social and political texts.

beyond mere survival, such as treatment, healing, seeking dignity, organizing, and reorganizing their major events and small incidents, their symbols and networks of meaning that organize their social life, their rites of passage to new experiences, institutions or actions, and express some forms of religiosity and their relationship with the natural world. Hammat, such as those of Moulay Yacoub, Lalla Shafia, Sidi Harazem, Moulay Ali Cherif, Moulay Hachem..." are examples of such sacred water, where the hammat are transformed from a source of water with mineral properties that are different from what people are used to consuming into a sacred shrine with many narratives that made this water anything but water. It was not known for its natural properties or its use in simple and small acts of survival, but as a carrier of metaphysical information, of which the ability to treat skin diseases, which was highly prevalent among Moroccans until the first half of the 20th century, is only one such manifestation.

Sacred water also appears as an inaugural good and a carrier of some rites of passage for some primary social institutions, such as marriage. The "Tissi" or "Arosh" ritual associated with marriage is a common wedding ritual in the southeastern regions, where water is used to bring blessings and good luck to the newlyweds and to ward off bad luck and misfortune. It is a ritual practiced by the bride on her first entry into the marital home, where she carries a jar of water that she drew from the water source in the village, according to a special ritual, and then sprinkles all the corners of the house and all its facilities (Fatima Faiz, 2022; p. 63). As part of the memory of water in Morocco, the "Taghanga" ritual continues to this day, revealing a complex and historical cultural relationship with water, reflecting what some anthropologists who worked in Morocco used to describe as pagan remnants in the practices and beliefs that many Moroccans believed and still believe in until today.

In addition to sacred water, there is another type of water that we can call community water or collective water, which is not historically owned by the state, individuals, or companies, but by the entire community, through which it builds its institutions, its division of labor, its techniques, its social, symbolic and economic arrangements, its modes of classification and distribution of power, and the type of its social ties. "Beyond the centrality of water in the reproduction of material life, water is a central element in social and cultural relations, man's relationship with nature, production relations, institutional organizations, power relations, value systems, and identities..." (Barbara Casciari, et al. 2013, p. 15). The most prominent reflection of this anthropological conceptualization of water in Morocco is how many communities have made water a social institution not only to manage this social good but also to reproduce all social life. Starting from the water bearer, the institution of water management consists of an organization similar to the social organization, headed by "a leader (Amgar n Waman), a sheikh (Anflos n Waman), a person in charge of its quantities

(Afran), a person in charge of counting it (Botanast), a person in charge of distributing it (Bou Sakoul), a person responsible for its distribution (Amazal), a supervisor of its distribution (Akafai, Amcharado, Aharsi) and a guardian of its techniques." This institution has historically possessed the authority to resolve disputes and conflicts over water and derived its legitimacy from customary and communal foundations that take into account labor, space, land ownership, water source, and social status and is always oriented toward social balance and the preservation of social relations and the quality of historical and ethnic ties between individuals and groups. In this type of society, water was not only a part of social organization, a record on which social ties are built and sustained but also the soul of the group and the mirror through which it sees itself in the world.

The social categorization of water does not stop at the boundaries of the previous models we mentioned (water of the sky, water of the state, sacred water, water of the community...), as the solution to the categorization can lead us to find other faces of water that reflect the nature and form of the social division of power, wealth and sacredness, and are based on the cultural structures that organize the group's perception of the cosmos.

The social and cultural presence of water in Morocco has undergone many major transformations. Arguably, the biggest transformation of water in Morocco occurred only two years after France colonized Morocco, when the water of God and the water of the community became the water of the state. On 17 July 1924, the first legal text on water in the history of Morocco was drafted, which the state invoked in issuing the first law on water in 1995, which meant to expropriate water, withdraw all forms of private ownership of all types of water and make it public property: "Water is public property and cannot be the subject of private ownership, subject to the provisions of Title II afterward." This falls within the framework of what the Moroccan state called the public domain, which is as follows:

1. All layers of water, whether at the surface or underground, water courses of all kinds and sources of all kinds, whatever their nature.
2. Lakes, ponds, marshes, coastal lakes, salt marshes, and swamps of all kinds of water areas that do not have direct contact with the sea. Land parcels that, without being permanently flooded, are not suitable for agricultural use in normal years, given their water potential.
3. Artesian wells, wells, and waterways of public use constructed by or on behalf of the State, as well as their protection zones defined by regulatory provisions. These areas consist of an immediate area that belongs to the water public domain and, if necessary, two areas, one near and one far, which are subject only to easements.
4. Navigation, irrigation, and cooking canals intended for public use, as well as the land along their free banks,

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which shall not exceed 25 meters in width for each free bank.

5. Embankments, dams, aqueducts, aqueducts, aqueducts, water canals, and pipes for public use to protect the land from water, irrigate and supply water to urban centers and rural communities, or for the use of water power.
6. The course of permanent and non-permanent watercourses, as well as their headwaters and the course of torrents where the flow of water leaves visible traces.
7. Boundaries to the limits of the level of floodwaters, the frequency of which shall be determined by regulatory texts for each watercourse or section thereof, as well as for all areas covered by a tide with a coefficient of 120 in the parts of the watercourse subject to the influence of this tide.
8. Free banks from the edge boundary:
  - Six meters wide on the following watercourses or sections of watercourses: Moulouya from its source to its headwaters, Sebou from its source to its headwaters, Loukous from its source to its headwaters, Umm al-Rabia from its source to its headwaters, and Abou Regregreg from its source to the Sidi Mohamed Ben Abdallah dam.
  - Two meters wide on streams or other watercourse segments.<sup>11</sup>

This text reveals how the state appropriated water through the Water Law and many of its clauses. Water was transformed from a collective, social, and cultural good and social construct into “public property.” With the state’s intervention, communities were left with no right to it except through some sort of complicity. The state also opted for strategies of indifference, ignoring the social and cultural uses of springs, waterways, wells, and streams. A quiet political struggle has emerged that does not directly confront authority, and hidden heritage of rights, resentments, violations, occupations, evasions, stories, rituals, looting, theft, and practical struggle emerged. These are presented as infra-politics, which groups, communities, and individuals use to regain some of their historical water rights without confrontation, public rejection, or overt struggle.<sup>12</sup>

## Water Politics: Beyond Scarcity

After independence, Morocco, benefiting from the agricultural modernization programs initiated by French colonialism, and recalling the political impact that drought and hunger had and could have on the country’s political stability and equilibrium, opted for agriculture as the basis on which a

post-independence Morocco could be built.<sup>13</sup> Therefore, it was natural that Morocco’s first political and economic plans were linked to the modernization of the rural world and the modernization of agricultural structures and production, to be able to ensure “food sovereignty” in a society whose memory retains until today all the fears associated with hunger.<sup>14</sup> Therefore, calls for agricultural modernization, and agricultural economic modernization became the millstones of the political discourse of this stage, with the state shifting all its political and economic weight, through public investments and the power of regulation, control, and legislation, to the agricultural sector.

The first five-year plan proposed by Abderrahim Bouabid when he was minister of economy and finance in the first government of post-independence Morocco was the first building block of Morocco’s water policies. The plan included an agrarian reform plan, the continuation of the dam policy initiated by France in 1929 in Morocco (Sidi Amacho Dam), a tenfold increase in the number of dams, land policies targeting land recovered from colonialism, the establishment of the National Irrigation Office (1960), and many other measures aimed at regulating and state-controlling water. The plan thus established a structure for sustainable inequality in the distribution and use of water and became part of the discourses of legitimization through which the state tried to justify social inequality in the distribution of water among Moroccans. If we take, for example, some figures provided by one of the architects of agricultural modernization and reform in Morocco after independence, we understand that the slogan of food independence that was raised in the wake of independence was only a banner to justify spending public money on projects that did not achieve their purpose, says Jacques Lucas: “These figures show the concentration of land ownership, with only 1% of the Moroccan population owning a quarter of the arable land, while half of Moroccan families own no more than five hectares, while a third of Moroccans do not own an inch of it” (Jacques Lucas, 1968, p. 387). The unequal distribution of land used for political purposes does not mean anything other than the unequal distribution of water. The major water projects developed over half a century did not achieve water justice but rather turned into a water rent that, according to some human rights organizations, benefited only the military and political elites to co-opt them by keeping the former away from politics

<sup>11</sup> Water Law 1995.

<sup>12</sup> We will return to this issue in a separate paper, “Water movements and waves of discontent in Morocco”.

<sup>13</sup> The eighteenth and nineteenth centuries are the most important examples of this, with historical sources indicating that banditry and unrest spread during drought years.

<sup>14</sup> The Casablanca Uprising of 1981 is one of the most important events in Morocco’s current history that still stirs the political and trade union memory in Morocco, called by trade unionists and politicians (the Comira Revolution, the Bread Uprising..) In “From the Year of the Elephant to the Year of the Merkan,” Abdel Ahad Sebti reveals how Moroccans have historically used misbags and moments of hunger and drought as resources to chronicle themselves.

and the political sphere and killing any political ambition in them, while targeting political elites to narrow their political horizon and block any claims to participate in governance, and at best to turn them into political employees without a social, cultural or economic project. At the same time, the poor remained far from all forms of benefit from the major water installations and projects financed by the state with public money. ATAC Morocco says in this regard: “Dams were a major tool for the regime in post-independence Morocco to win the favor and support of large owners of agricultural land. After the acquisition of land by senior officers, security and military officials as well as senior notables, the acquisition of water came through the construction of dams, which allowed granting large privileges to these elites at the expense of the poor” (Larbi Hafidhi, ATAC Morocco, 2018)

If ATAC’s analysis intersects with the analysis of many political visions and the perception of many social science researchers of the water crisis in Morocco, and if the political economy of water in Morocco has historically been used to answer political needs, primarily to determine the nature and form of government and provide a safe environment for the transfer of power starting in the late 1980s, the major political schemes included in the new political project after 1999 were policies that depleted water resources.

## Green Morocco Plan: Water Depletion Without Food Security

The Green Morocco Plan is one of the major structured plans that adds little, except for raising the value of private capital for large investors in the agricultural sector while increasing poverty and migration rates in the areas benefiting from the program. This is mainly due to the lack of access to water for small farmers and the program’s inability to respond to the economic and social needs of local communities after large landowners, producers, and agricultural companies control water and turn small farm owners into a peasant proletariat deprived of water, land, and financial resources.

This conclusion is supported by the water impoverishment experienced by many regions in Morocco, due to the tendency of agricultural elites, large landowners, and farming companies owned by major economic groups, in agricultural production and the food industry, after the Green Morocco Plan announced the cultivation of water-intensive agricultural products destined mainly for export. Reports issued by the Moroccan Ministry of Agriculture indicate a significant increase in agricultural exports between 2009 and

2019, 10 years after the launch of the Green Morocco Plan, as the volume of exporting early vegetables increased by 66% from 760,000 tons in 2009 to 1,265,000 tons in 2019, most of which are produced in a region with severe water shortages, namely the Souss Massa Draa region, where the region alone produces more than 990,000 tons. The export volume of citrus fruits increased by 38% from 460,000 tons in 2009 to more than 607,000 tons in 2019, more than 60% of which are produced in regions with high water stress, such as Souss Massa Deraa, Marrakech Safi, and the eastern region, and the export of processed agricultural products increased by 89% from 223,000 tons in 2009 to more than 422,000 tons in 2019.<sup>15</sup>

The picture presented by these figures reflects the nature of Morocco’s agricultural economy, which is based on the export of water,<sup>16</sup> and the significant shift in the structure of national agricultural production, with increased investment in water-depleting crops, whose production quantities have doubled at the national level, most of which are destined for export. On the other hand, the volume of Morocco’s imports of grains and wheat has increased in recent years. While agricultural elites and large agricultural companies benefit from the export of this type of product, and this is not reflected in higher prices for Moroccan consumers due to the doubling of the prices of early vegetables, citrus fruits, vegetables, and fruits in general over the past ten years, the national economy bears the cost of importing grains and wheat that has multiplied 10 times in the past five years, as Morocco ranked in the latest report of the World Food Organization as the fifth importer in Africa for grains and wheat.

The political explanation based on the ecological authority that controls political knowledge and ecological discourse may seem somewhat comforting and convincing to common sense and public opinion, as droughts and water shortages are put forward as the main causes of the inability of national agricultural production to meet the needs of Moroccans for the most consumed agricultural products in the country. Morocco imports half of its needs of cereals and wheat, and all its needs of tea, coffee, vegetable oils, and sugar, with all the implications this has in terms of financial costs, which affect other public investments and directly impact health, education, employment, and public equipment. However, these data show that the import of the most consumed agricultural products in Morocco is related to two main factors: The first relates to Morocco’s irrigation area and the nature of the beneficiaries of water. The total irrigated land in Morocco does not exceed 19% of the total arable land and consumes about 87.8% of its water withdrawal, which exceeds the global average of water withdrawal in the agricultural sector, estimated by the World Agriculture and Food Organization at

15 For more details, see the Green Morocco Plan website of the Moroccan Ministry of Agriculture <https://www.achdartleflaha.ma/>

16 We are referring to the dominance of water-intensive products in the list of export-oriented agricultural products.

70%. The rest of the non-irrigated land remains dependent on rainfalls and the weather changes, meaning that agricultural elites with large estates and farming villages that produce export-oriented agricultural products consume most of Morocco's water resources.

Looking at these figures from a different angle reveals that 19% of Morocco's irrigated lands, which consume a higher percentage of the global average water withdrawal, are mostly export oriented. They are, therefore, subject to the logic of the market, the priorities of neoliberal discourse, and the agro-export economy, and have not contributed most appropriately to creating agricultural or economic added value for the political system or leading to greater spatial and social justice in the rural world in Morocco. This is because the major public investments of the Green Morocco Plan have mainly targeted 19% of the land and its owners, while more than 80% of the agricultural land owned by small farmers remained outside the plan and did not benefit from the financial and technical resources put in place by the state. Most agricultural exploitations remained small holdings, which mainly produce poverty and the poor, especially as most rely on subsistence farming and an inward-oriented agricultural economy, and agricultural products that are not exported. Even when they do turn to products of higher economic value, small holdings do not have basic agricultural equipment and are not organized into economically beneficial village associations or organizations. Due to their small scale, they do not benefit from state subsidies, nor do they benefit from social protection programs or insurance against disasters and droughts. This means that the drought years for small farmers are primarily years of poverty and search for water, with all the suffering, hardship, and pain that this entails. Those who have wells see their water dry up as large farmers and agricultural companies take over the region's water resources. In this context, very telling is the story of a small farmer in Chichaoua, a farming region that has seen the arrival of large farmers in recent years. He chose to use his savings to dig a well on his small property, which does not exceed two hectares, to use it to meet the water needs of his crops and his family's needs. The depth of the well dug by the man was more than 120 meters, which was sufficient to meet his water needs. However, the purchase by a farming company of a large farming land adjacent to him, with an area of 75 hectares, and its drilling of seven wells with modern technologies and a depth of more than 200 meters, prevented the flow of water to his well. He was unable to meet the water needs of his small farm nor even those of his family. This led to the drying up of his olive trees and the loss of crops that represented, for a small farmer like him, his entire wealth. This is compounded by the absence of any form of drought insurance, contrary to the case of farm villages and large farmers who insure their crops against drought and other natural risks. The only solution left for these small farmers is to abandon their farming and migrate to seek resources outside the agricultural economy: "I have

lived in this land since I was born, I never thought of living elsewhere, it is my origin and my roots. My grandparents and great-grandparents lived here, and my children were born on this land, but today I am really thinking of selling it if there is a buyer, there is no water left in the estate and I no longer have money to dig the well, because once the neighboring land was sold and equipped and planted with avocados, there was no water left in my well. I don't know how long I can stay here, but I'm seriously thinking of moving to the city, at least I will find drinking water easily, my children will study in schools near them, and I will find work anywhere, the important thing is not to stay here and die a slow death".

The case of this small farmer in an arid region, the "confiscation" of water by large agricultural companies and large farmers and their use of a public and collective resource to produce private wealth can only lead us to say with Vandana Shiva that globalized industrial agriculture today does not achieve food sovereignty or guarantee food security, but rather threatens social stability, impoverishes local communities and deprives them of their resources and habits of production and preservation of ecosystems: "The production, transformation and distribution of food as we live today puts us in the face of an ever-expanding crisis. The well-being of the earth, the health of the population, and the stability of our societies are severely threatened by globalized industrial agriculture, motivated primarily by the search for profit. The inefficiency of our current agricultural production model is self-evident: it is irrational and unsustainable, pushing the earth, its ecosystems, and the species that inhabit them to the brink of annihilation." (Vandana Shiva, 2020, p. 8).

Recalling the writings of the Indian researcher and ecological activist Vandana Shiva in this context was only to confirm a previously mentioned fact regarding the inability of the Green Morocco Plan to guarantee the country's food sovereignty by forcing it to import its most important and most consumed food resources such as wheat, sugar. This also exposes the failure of the promises and justifications made by the state and the elites who oversaw and benefited from the project, namely, its supposed ability to contribute to improving the trade balance and supporting the Moroccan treasury with hard currency. These claims implied that the national economy benefited from the project. Yet, even if we set aside the ecological and water issues, this benefit has not materialized either, because the elites investing in the agricultural sector and the large agricultural companies integrated into the globalized market economy continue to benefit from it at the expense of millions of poor, small-scale farmers and a vital public resource for which the state invests millions of dirhams every year in its treatment.

The failure of the Green Morocco Plan as an attritional program is not only reflected in its inability to fulfill the promises it made when it was politically marketed by the state as a valve for food security in Morocco, a project to

create a peasant middle class, and a guarantee to stabilize villagers in their rural areas, reduce migration to cities, and anchor youth in their areas of origin. The High Commission for Planning in Morocco revealed in its social indicators for 2023 that the prevalence of moderate or severe food insecurity is estimated at 22.1%, compared to 25% in the previous year. This is confirmed by a study conducted by Synergia Group, which revealed that about 60% of Moroccans reduced the budget allocated for food in 2023 due to the increase in food prices, and 10% of them were forced to increase the budget allocated for food, which means that about 60% have less access to food compared to the previous years, or at least changed their diet by giving up certain foods, as revealed by 62% of Moroccans, who confirmed that they sacrificed certain foods to maintain the financial stability of their families or because they could not afford to buy certain types of food due to their high prices.

The high rates of food insecurity in a country whose arable area is among the largest in the Arab world, and which imports the food of the poor (wheat, sugar, tea), means that the Green Morocco Pla could not achieve its most important goals. Instead, it has benefited a comprador class that puts profit above all national interests, even when it comes to a resource that future generations of poor people will be deprived of. The neglect of public investment to secure these basic resources has led to missed opportunities to improve the quality of education and has affected the development of health institutions that respect human dignity. In addition, it has led to a lack of employment opportunities, resulting in a decline in social inclusion and the lack of a minimum level of economic dignity for citizens.

## Commodifying Water and Deepening Scarcity

The commodification of water refers to how water is presented in public policies in Morocco, which appears in two forms: The first is the experience of privatizing water distribution in many cities through the French delegated management companies: Amandis, Redal, and Ledec. This was before the transition at the beginning of 2023, following the adoption of Law 83.21 concerning the establishment of regional multi-service companies, after the failure of this experiment and the increasing waves of discontent with these companies in major Moroccan cities. Water and electricity became part of the topics of discontent and protest, provoking a change in the political mood of residents in most cities in which these companies – as many described – turned into predatory institutions, with water and electricity bills becoming a source

of discomfort for the poor and the underprivileged residents of these cities, and a cause for their protests.

The second form of commodification of water is the bottling of mineral water and freshwater and its distribution by commercial companies, which occupy more than 90% of the Moroccan market, with Moroccans' consumption estimated at 18 liters per capita per year. This is distributed among three companies owned by major economic groups: Holmarcom, whose company Oulmes monopolizes more than 70% of the market, Al Mada, whose company Sotherma occupies 20% of the market, and the mineral water company Karama, which has 4.5% of the market. This means that the three major Moroccan companies monopolize more than 94% of the market.

Mineral water extracted from springs located in different regions of the country generates millions of dirhams annually for these companies and the economic groups to which they belong, with their turnover reaching billions of dirhams. For example, during the first half of 2023, the turnover of Holmarcom's Oulmes company reached more than one billion dirhams, while the company, like all extractive companies, employs only a very limited percentage of the local population of the region, while the poverty and vulnerability index in Oulmes – the region that bears the company's name – is about 30%, which is almost the same in all regions where mineral water is extracted, where the profits of the companies exploiting the sources rise in parallel with the high poverty rates in these areas. What is more, the local population does not benefit from the profits generated by these companies, except for the local taxes that these companies pay to local and collective councils, which do not help to solve structural issues or respond to the development needs in these areas.

Although Article 31 of the Moroccan Constitution stipulates that “the state, public institutions, and territorial collectivities work for the mobilization of all available means to facilitate the equal access of citizens to conditions that permit their enjoyment of the right [...] to access to water and to a healthy environment,” the National Council for Human Rights in Morocco considered that 20% of Moroccans are still deprived of access to safe drinking water. This means that more than 7 million Moroccans do not benefit from a human right provided by the Constitution and international conventions ratified by Morocco. In addition, the High Commission for Planning released figures in 2020 on poverty in its various forms (absolute poverty 1.7%, vulnerability 7.3%, relative poverty 12.7%, multidimensional poverty 8.2%), which shows that more than 66% of the poor in Morocco do not have access to drinking water.

The water situation in Morocco is such that the state declared a state of water emergency in July 2022, prompting some constitutional institutions, such as the Economic, Social and Environmental Council, to call on the state to take urgent

measures to minimize the effects of drought and the decline in water resources. The call for austerity in the distribution, consumption, and use of water appeared in several decisions and communications issued by various public institutions, the most important of which was the memorandum addressed by the Minister of Interior to regional governors, which included several decisions:

1. Apply the necessary restrictions on the volume of water distributed for consumption.
2. Enforce a ban on watering green spaces and golf courses with potable and surface water.
3. Enforce a ban on cleaning streets and public places with potable water.
4. Prevent the illegal withdrawal of water from water holes, wells, springs, waterways, and water transportation channels.
5. Limit the filling of public and private pools to once a year and have water recycling equipment installed.
6. Prohibit the use of potable water to wash cars and vehicles.

In addition, many senior officials in regions suffering from water scarcity decided to ban the cultivation of red and yellow watermelons, as in the case of Rachidia and Guelmim, while others moved to legalize the cultivation of this water-depleting product, in specific areas, as in the case of Tata and Chichaoua provinces. Many regional and provincial councils, local communities, and some local associations have also mobilized their financial and logistical resources to deliver water via tankers to water-scarce areas. However, the most important and largest project to date is the one based on the concept of water solidarity. The state implemented the idea of a water highway to transport water from the Sebou basin to the Bouregreg basin, in order to supply 12 million people in the Rabat and Casablanca axes with potable water. Given the location of the two cities in Morocco's current image and the image of the state to its people and abroad, as well as the place of the two cities in Morocco's protest memory, especially Casablanca, it seems that this investment was primarily political, not only because the state feared that its image would be damaged before the Moroccan and international communities, but also to prevent all forms of discontent that might arise from the absence of water.

Have these decisions been sufficient to curb the water crisis and ensure water security, a concept that has become part of Morocco's political discourse over the past two years? Have they mitigated the depletion of water resources, which benefits certain groups that are often strangers to the areas where water is being depleted?

Undoubtedly, the importance of this type of measures can theoretically contribute temporally and spatially to solving some simple issues of access to water, access to water for certain regions and groups, and patching up solutions for other regions and groups, but they do not fundamentally

solve the water crisis, nor do they solve the issue of water insecurity that threatens the Moroccan economy and makes 14% of the agricultural sector's contribution to national GDP under constant threat.

Most economic institutions and international and national human rights organizations that monitor the state of development and growth consider water to be an essential element in measuring poverty, development, and quality of life. If the Moroccan High Commission for Planning considers access to water one of the main indicators for measuring the state of poverty in Morocco. If the memorandum issued by the National Council for Human Rights considers access to safe drinking water as a basic right, it is impossible to think about the circle of rights outside it. The UN Sustainable Development Program has made access to water and sanitation one of its goals and a manifestation of social, economic, and spatial inequalities that directly affect the poor, vulnerable, and marginalized: "3 out of 10 people lack access to safe drinking water services, while 6 out of 10 people lack access to safely managed sanitation facilities." Women "are responsible for collecting water in 80% of households that do not have access to water." This directly and unfairly affects the health, social status, and life chances of individuals and communities. "Every day, nearly a thousand children die from water and sanitation-related diarrheal diseases. [...] Deaths from floods and other water-related disasters account for 70% of all deaths associated with natural disasters."

The challenge of access to clean water, which the UN Sustainable Development Goals set for 2030, faces several structural difficulties in Morocco, which makes it difficult to achieve. First, with the continuous decline of water stocks, international and national institutions estimate that the country is heading toward absolute water scarcity by 2050. The second is the state's option for export agriculture. The third is the high percentage of people who do not yet have access to safe drinking water. The most important is the dominance of the neoliberal option of the commodification of water, holding individuals responsible for water waste and increasing the price of water, which in one way or another means deepening water inequalities.

The New Development Model Committee, whose reports have become a reference text for current public policies and the decisions and programs of public officials in all fields, considered in its thematic report in the section on water, that one of the main solutions in water reform is raising the price of water and public-private partnership in creating water infrastructure, water distribution as well as controlling water withdrawals of all kinds. The report states that: "This [water] reform aims to create a quid pro quo for the services provided by mobilization infrastructures, in response to the large investment needs, and to mitigate the imbalances in the choice of investments resulting from free dams and irrigation services... The adoption of the reform ... will automatically lead to an increase in the cost for distribution

offices and agencies, which will affect the tariffs applied to users of drinking water, as well as users of irrigation water... Consequently, it is necessary to review the price of water for all users, taking into account the real cost of production and establishing a remuneration for the services provided by water infrastructures. In this context, two forms of tariffs have been proposed: A gradual increase in water tariffs applied to all users to ensure a return for the services provided, with the state stopping subsidizing the public institutions in charge of distributing and maintaining the networks, and directly subsidizing the “social” consumption of low-income citizens...”

The direction that will govern public water policies in Morocco in the coming decades is based on a neoliberal spirit, through the commodification of water, freeing it from the idea of public ownership and public service, and subjecting it to the logic of the market. Talk of raising water prices and harmonizing tariffs will undoubtedly affect the access to water for the poor and marginalized, 20% of them are unable to access potable water today. This percentage will undoubtedly increase after the rise in water tariffs. Access to water – if this project is implemented as presented by the New Development Model Committee – will become part of discrimination against those who cannot afford the higher water tariffs. If the bulk of the poor and middle class currently complain about the high cost of water and electricity in Morocco, it is normal that after raising the price of water, the slogan of rationalizing consumption, rationalizing water use, and reducing water waste will turn into water deprivation and unfair distribution and consumption between social groups, between those that have financial resources to afford the cost of consumption, and those that lack financial resources and are only allowed to consume what the committee calls “social consumption fractions”. Those with low to average income will no doubt think twice before opening the water taps.

## Conclusion

This paper has tried to present the current water situation and water policy in Morocco in light of the climatic changes that the world is experiencing, a situation that disproportionately affects individuals and groups in Morocco. The transformation of these water-related conditions is not merely the result of changes isolated from Morocco’s political and social structures and choices since independence; rather, it is primarily rooted in the political economy of water that has taken shape over the past six decades. State control over water in post-independence has primarily meant stripping water of its local history and spiritual dimension and dismantling the cultural and social structures that sustain it. The “On Road 96 Movement” in Imidir, for example, sees extractive companies as a threat to the social construction of water. The adoption

of a post-independence liberal economic policy and the emergence of neoliberal options as a governing paradigm for public and sectoral policies in Morocco has only deepened the water crisis. The structured political and economic projects of the post-1999 state and the dominance of export agriculture did not address the question of water justice or social justice in Morocco, but only contributed to the development of private capital, encouraging and legitimizing the commodification of water and the legalization of water deprivation.

## Recommendations:

1. Water crisis, as a manifestation of the sustainable ecological crisis, requires public and agricultural policies that take into account the scarcity of water and move toward rationalizing its use in the agricultural sector.
2. Strengthening water justice policies and facilitating access to and use of water, following the Moroccan Constitution’s stipulation of the right to water as a basic human right, and ensuring that all Moroccans have access to safe drinking water.
3. Reconsidering the adopted agricultural policies and the agricultural economic model based on export farming and applying restrictions on the export of agricultural products to ensure the ability of the poor and those with low income to access them.
4. Promoting non-depleting agricultural activities that enhance food sovereignty and food security, prevent water-depleting crops, especially in dry areas (red watermelons, avocados), as they threaten social stability in these areas and disintegrate their social structure, and instead promote local crops.
5. Imposing a water tax on agricultural companies and large producers, raising the tax rate on the tourism sector, and requiring tourist facilities to provide water treatment plants.
6. Roofing wells, monitoring the drilling of new ones, and boreholes in dry areas, and implementing laws and memorandums related to water consumption.
7. Develop strategies to preserve biodiversity and river ecosystems, especially in dam construction policies.
8. Establishing a policy of water solidarity by expanding the network of waterways and developing plans to exploit the waters of the valleys that flow into the sea by creating water lakes.
9. Requiring city and county councils to set up wastewater treatment plants and use them to irrigate green areas instead of drinking water.
10. Recognizing the social nature of water in the pricing of desalination plant water at the beginning of its exploitation, and distributing water pricing based on social maps that take into account the economic situation of the population and the nature of the activities in which water is being used (consumption, industry, agriculture).

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The Arab Reform Initiative is an independent Arab think tank working with expert partners in the Middle East and North Africa and beyond to articulate a home-grown agenda for democratic change and social justice. It conducts research and policy analysis and provides a platform for inspirational voices based on the principles of diversity, impartiality, and gender equality.

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