

A RAIA profile on: **the King of Morocco His Majesty**

## **King Mohammed VI**

Fifth part of a six part series on climate leaders ahead of the 2025 United Nations Climate Change Conference

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## **Introduction**

**King Mohammed VI** was born on 21 August 1963 and ascended the throne on 23 July 1999, after his father's passing (King Hassan II).<sup>1</sup> He is part of the Alawi dynasty, the oldest Islamic dynasty to exist today, with the royal family having reigned over Morocco for 394 years, making him the 23rd sovereign<sup>2</sup>. Before his coronation, the leader worked several months at the European Commission in Brussels to broaden his education and training in law and political science<sup>3</sup>.

King Mohammed VI has emerged as a climate leader driven by a strategic vision that links environmental action to national security, development, and economic transformation. His climate policies were motivated by the goal of eliminating inequalities in Morocco and elevating the country's standing in the international arena. Mohammed VI recognized that Morocco, as a climate-vulnerable state, needs to adopt protective measures against anticipated environmental challenges to ensure sustained growth. Being engaged at international conferences, especially those on climate change and climate action, such as hosting COP22, aimed to position Morocco as a climate frontrunner and emphasised the need for greater collaboration among the Global South.

His primary objectives pertained to the development of the country, starting with the most fundamental issues. These encompassed extreme poverty, as well as food and water scarcity. King Mohammed VI was also committed to tackling more complex challenges, such as political reform, particularly following the 'years of lead' (a period of repression), and viewed investment in green policies as a way to ensure a steady stream of revenue for Morocco's future. In addition, his policies reflect a broader economic agenda as both agriculture (a major export sector) and tourism are significantly impacted by climate change.

## **Morocco**

Morocco is a country in North West Africa, covering an area of 716,550 sq km (twice the size of California) with a population of around 37.3 million people<sup>4</sup>. The capital of Morocco is called Rabat. It neighbours three countries: Algeria, Mauritania, and Spain, as seen in the map below.

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<sup>1</sup> Biography of HM King Mohammed VI' (Kingdom of Morocco – Official Portal, undated) <https://www.maroc.ma/en/morocco/biography-hm-king-mohammed-vi> accessed 24 July 2025.

<sup>2</sup> Clifford Edmund Bosworth, *The New Islamic Dynasties : A Chronological and Genealogical Manual* (Edinburgh University Press 2012).

<sup>3</sup> Robert Rauch, 'Muḥammad VI | King of Morocco | Britannica' (Britannica, undated) <https://www.britannica.com/biography/Muhammad-VI> accessed 31 July 2025.

<sup>4</sup> Central Intelligence Agency, 'The World Factbook: Morocco' (CIA, updated 2025) <https://www.cia.gov/the-world-factbook/countries/morocco> accessed 24 July 2025.



A Map of Morocco<sup>5</sup>

Historically, it is important to note that Morocco was under the rule of France and Spain for over 44 years. Morocco gained its independence on 2 March 1956. In 2025, Morocco's GDP per capita is US\$3,632<sup>6</sup>, which classifies it as an upper-middle income country or a developing country<sup>7</sup>. When it comes to the Human Development Index, Morocco, in 2025, placed in the 120th spot out of 193 countries with a result of 0.710, which is a high rank on the development scale<sup>8</sup>.

### King Mohammed VI's Political Career

King Mohammed VI's political career began in the early 1980s, when his father gradually entrusted him to take on royal responsibilities, including both political and ceremonial duties. By 1985, he was tasked with coordinating and overseeing the armed forces<sup>9</sup>. After his father's death on 23 July 1999, Mohammed VI was designated king at the age of 35<sup>10</sup>. The royal succession followed seamlessly with

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<sup>5</sup> BBC News, 'Morocco Country Profile' (BBC News, 24 April 2018)

<https://www.bbc.com/news/world-africa-14121438> accessed 24 July 2025.

<sup>6</sup> Trading Economics, 'Morocco GDP per Capita' (Trading Economics, 2025)

<https://tradingeconomics.com/morocco/gdp-per-capita> accessed 24 July 2025.

<sup>7</sup> World Bank, 'World Bank Country and Lending Groups' (World Bank, updated 2024)

<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups> accessed 24 July 2025.

<sup>8</sup> United Nations Development Programme, Human Development Reports: Country-specific data – Morocco (HDR 2025) <https://hdr.undp.org/data-center/specific-country-data#/countries/MAR> accessed 24 July 2025.

<sup>9</sup> BlackPast, 'Mohammed VI (1963–)' (BlackPast, undated)

<https://www.blackpast.org/global-african-history/mohammed-vi-1963/#:~:text=In%20the%20early%201990s%2C%20King,a%20new%20constitution%20be%20written> accessed 24 July 2025.

<sup>10</sup> Encyclopædia Britannica, 'Muhammad VI' (Encyclopædia Britannica, undated)

<https://www.britannica.com/biography/Muhammad-VI> accessed 25 July 2025.

King Mohammed VI continuing his father's reforms, specifically the modernization of Morocco through economic restructuring. This included new roads, tramways, and a high-speed train line. This encompassed new roadways, tram networks, and a high-speed rail line. During the early stage of his rule, a renewable energy sector was established, and a new family code, 'Mudawana', was implemented, augmenting the rights of Moroccan women<sup>11</sup>. His initiatives led to the income per capita nearly doubling to \$3,000 from 1999 to 2011<sup>12</sup>.

After the Arab Spring in 2011, a movement demanding democracy in Egypt and other Arab countries led to growing dissatisfaction among Moroccans with their government. A year earlier, WikiLeaks also exposed private diplomatic messages, linking the government and the king's court to allegations of corruption<sup>13</sup>. Demands for greater democracy were voiced openly in Morocco. Mohammed VI reacted by proposing a new constitution to be written. The new constitution was presented to the people and approved in a nationwide referendum on July 1, 2011, and went into effect on July 30, 2011<sup>14</sup>.

These early policies reflect Mohammed VI's emergence as a strategic leader, linking environmental action to security, development, and economic growth.

## **King Mohammed VI's Background Information**

King Mohammed VI completed primary and secondary education in Rabat at the elite Royal College. Having been brought up in the royal palace, Mohammed VI learned early on a sense of duty and awareness of the country's long-term development needs<sup>15</sup>. He then pursued his studies in law and public administration at the Mohammed V University, before earning a PhD in law in France with a dissertation on Maghreb–European relations, exposing him to global governance, diplomacy, and economic integration<sup>16</sup>.

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<sup>11</sup> Middle East Institute, 'Consistency and Change in Morocco under King Mohammed VI' (Middle East Institute, undated)  
<https://www.mei.edu/publications/consistency-and-change-morocco-under-king-mohammed-vi> accessed 25 July 2025.

<sup>12</sup> Middle East Institute, 'Consistency and Change in Morocco under King Mohammed VI' (Middle East Institute, undated)  
<https://www.mei.edu/publications/consistency-and-change-morocco-under-king-mohammed-vi> accessed 25 July 2025.

<sup>13</sup> The Guardian, 'WikiLeaks Cables Accuse Moroccan Royals of Corruption' (The Guardian, 6 December 2010)  
<https://www.theguardian.com/world/2010/dec/06/wikileaks-cables-morocco-royals-corruption> accessed 25 July 2025.

<sup>14</sup> International IDEA, Moroccan Constitution: A Critical Analysis (2011)  
<https://www.idea.int/publications/catalogue/2011-moroccan-constitution-critical-analysis> accessed 25 July 2025.

<sup>15</sup> Robert Rauch, 'Muhammad VI | King of Morocco | Britannica' (Encyclopædia Britannica, undated)  
<https://www.britannica.com/biography/Muhammad-VI> accessed 25 July 2025.

<sup>16</sup> BlackPast, 'Mohammed VI (1963–)' (BlackPast, 2023)  
<https://www.blackpast.org/global-african-history/people-global-african-history/mohammed-vi-1963/> accessed 25 July 2025.

As a Crown Prince, Mohammed VI was entrusted with military responsibilities, among delegations abroad, and presided over charity initiatives<sup>17</sup>. His increasing visibility depicted him as a modern and empathetic monarch-in-waiting compared to the authoritarian rule of King Hassan II. After the death of his father, Mohammed VI inherited a country that, while politically stable, faced widespread socioeconomic challenges: poverty, unemployment, and regional disparities<sup>18</sup>. It led him to conclude that Morocco needs a transformation, rooted in sustainable and long-term economic resilience. One of his earliest conclusions was in energy security and independence; he knew that until Morocco relied on imported fossil fuels, it would continue to expose the country to economic vulnerability<sup>19</sup>.

In addition, he founded the 'Mohammed VI Foundation for Environmental Protection' early in his reign. The foundation, chaired by his sister Princess Lalla Hasnaa, highlighted environmental education, coastal preservation, and sustainable urban development. It showed not only a commitment from the institution but also a personal belief in taking care of the environment<sup>20</sup>. The initiative was followed by major investments, such as the Noor Ouarzazate complex (mega solar projects), among hydroelectric and wind power developments. Moreover, his majesty not only framed climate action as a domestic necessity but as a diplomatic initiative, helping Morocco earn global recognition for climate leadership<sup>21</sup>. Under his leadership, climate policy became a bridge between Morocco's internal development goals and global presence.

## King Mohammed VI's Personal Life

King Mohammed VI was married to Princess Lalla Salma from 2002–2007 and had two children, Crown Prince Moulay Hassan and Princess Lalla Khadija<sup>22</sup>. Lalla Salma had a great influence on him, especially during his early reign. She was a professional computer engineer and the first publicly recognised consort in Moroccan history. Her activism through the Lalla Salma Foundation for Cancer

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<sup>17</sup> Middle East Policy Council, 'Morocco: Political Reform in a Changing Society' (MEPC, undated) <https://mepc.org> accessed 25 July 2025.

<sup>18</sup> Anouar Boukhars, 'Morocco's Experience with Political Reform' (Carnegie Endowment for International Peace, 2011) <https://carnegieendowment.org/2011/06/30/morocco-s-experience-with-political-reform-pub-44861> accessed 25 July 2025.

<sup>19</sup> The World Bank, 'Morocco: Achievements and Challenges in the Green Energy Transition' (The World Bank, undated) <https://www.worldbank.org> accessed 25 July 2025.

<sup>20</sup> Mohammed VI Foundation for Environmental Protection, 'About the Foundation' (Mohammed VI Foundation for Environmental Protection, undated) <https://www.fm6e.org/en> accessed 25 July 2025.

<sup>21</sup> United Nations Climate Change, 'Full Text of the King's Address at the Opening of COP22' (UNFCCC, 15 November 2016) <https://unfccc.int/news/full-text-of-the-king-s-address-at-the-opening-of-cop22> accessed 25 July 2025.

<sup>22</sup> Robert Rauch, 'Muhammad VI | King of Morocco | Britannica' (Encyclopædia Britannica, undated) <https://www.britannica.com/biography/Muhammad-V> accessed 25 July 2025.

Prevention and Treatment made her widely admired by the public<sup>23</sup>. The organisation also correlated closely with Mohammed VI's bigger objectives for social change. Princess Lalla Hasnaa, the King's sister, also played a key role in creating Morocco's soft power. She is a spokeswoman for the monarchy at international events, for instance, the UN Climate Action Summit and youth sustainability forums<sup>24</sup>. She helps improve the kingdom's reputation. The influence of his family, especially through female leadership, has complemented the King's modernizing vision.

As for his health, King Mohammed VI has undergone multiple medical procedures, including two heart surgeries between 2018 and 2020<sup>25</sup>. Whilst his health kept him from making public appearances, he was able to remain politically active, often working privately or delegating temporarily<sup>26</sup>. Overall, the Moroccan government sought continued stability through Mohammed VI's long period in power and the slow training of Crown Prince Moulay Hassan<sup>27</sup>.

## **King Mohammed VI's Stake**

To assess Morocco's environmental challenges, a comprehensive outlook on the climate situation of the country will be provided, and its adverse impacts on local communities, on a social and economic level. The effects of climate change hinder Morocco's development, which is why King Mohammed VI is dedicated to addressing them.

The biggest issues Morocco is facing are poverty, misery, and illiteracy, as stated by the leader himself during an interview<sup>28</sup>. He also addressed the need for reform, primarily after the 'years of lead' (period of repression) on the principle that the government shall serve the people and not vice versa<sup>29</sup>. On this basis, the king understands the value and need for the country to invest in green policies, as these funds would provide a steady stream of money for Morocco's future.

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<sup>23</sup> Bladi.net, 'Princess Lalla Salma: Profile of Morocco's First Publicly Recognized Royal Consort' (Bladi News, 2023) <https://www.bladi.net> accessed 25 July 2025.

<sup>24</sup> Mohammed VI Foundation for Environmental Protection, 'Activities and Initiatives' (Mohammed VI Foundation for Environmental Protection, undated) <https://www.fm6e.org/en> accessed 25 July 2025.

<sup>25</sup> Associated Press, 'Moroccan King Mohammed VI Undergoes Successful Heart Surgery' (AP News, 14 June 2020) <https://apnews.com> accessed 25 July 2025.

<sup>26</sup> Morocco World News, 'Crown Prince Moulay Hassan Steps Further Into Royal Role' (2023) <https://www.morocoworldnews.com>.

<sup>27</sup> Morocco World News, 'Crown Prince Moulay Hassan Steps Further Into Royal Role' (Morocco World News, 2023) <https://www.morocoworldnews.com> accessed 25 July 2025.

<sup>28</sup> TIME, "'Whatever I Do, It Will Never Be Good Enough'" (TIME, 26 June 2000) [https://time.com/archive/6956505/whatever-i-do-it-will-never-be-good-enough/?utm\\_source=chatgpt.com](https://time.com/archive/6956505/whatever-i-do-it-will-never-be-good-enough/?utm_source=chatgpt.com) accessed 26 June 2025.

<sup>29</sup> Le Monde, 'Maroc : Mohammed VI estime avoir réglé le dossier du Sahara Occidental' (Le Monde.fr, 4 September 2001) <https://www.lemonde.fr> accessed 25 July 2025.

Morocco is confronted with environmental challenges, causing King Mohammed VI to acknowledge the necessity for action. The most significant challenges experienced by the region include desertification, extreme weather conditions, and sea level rise<sup>30</sup>. These challenges have a profound impact on the most important sectors of the economy. Agriculture accounts for almost 15% of the GDP<sup>31</sup> and employs 40% of the population<sup>32</sup>. Tourism generates 7.3% of the GDP, and whilst it makes up a smaller share, it is the fastest growing industry in Morocco, and currently supports approximately two million direct/indirect jobs<sup>33</sup>.

## **Environmental Challenge #1: Desertification**

Desertification by 'UNCCD Terminology' is the degradation of land in arid, semi-arid, and dry sub-humid areas as a result of human activities and climatic variations; it can take centuries for the topsoil to restore once lost<sup>34</sup>. Morocco is particularly susceptible to temperatures projected to increase between 1 to 1.5°C by 2050 (rate of warming higher inland) and average rainfall expected to decrease by 10–20 percent, and 30 percent in the Saharan regions by 2100<sup>35</sup>.

Extreme fluctuations in temperature and precipitation are causing the Saharan Desert to expand northeastward, threatening almost 90% of Morocco's land with desertification<sup>36</sup>. Only regions near the Mediterranean Sea, north of the Atlantic Ocean, and northwest of the Atlas Mountains are likely to remain unaffected<sup>37</sup>. The following graph illustrates these projections.

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<sup>30</sup> International Organization for Migration, *Assessing the Evidence: Migration, Environment and Climate Change in Morocco* (IOM 2016) [https://publications.iom.int/system/files/pdf/assessing\\_the\\_evidence\\_morocco\\_en.pdf](https://publications.iom.int/system/files/pdf/assessing_the_evidence_morocco_en.pdf) accessed 14 July 2025.

<sup>31</sup> US Department of Commerce, 'Morocco – Agricultural Sector' (Trade.gov, 2023) <https://www.trade.gov/country-commercial-guides/morocco-agricultural-sector> accessed 14 July 2025.

<sup>32</sup> Kingdom of Morocco, 'Morocco's Economy Sees 3.8% Growth in 2024' (Maroc.ma, 6 June 2025) <https://www.maroc.ma/en/news/moroccos-economy-sees-38-growth-2024> accessed 14 July 2025.

<sup>33</sup> UNWTO, *Tourism Doing Business: Investing in Morocco* (UNWTO, 2024) <https://www.unwto.org/investment/tourism-doing-business-investing-in-morocco> accessed 14 July 2025.

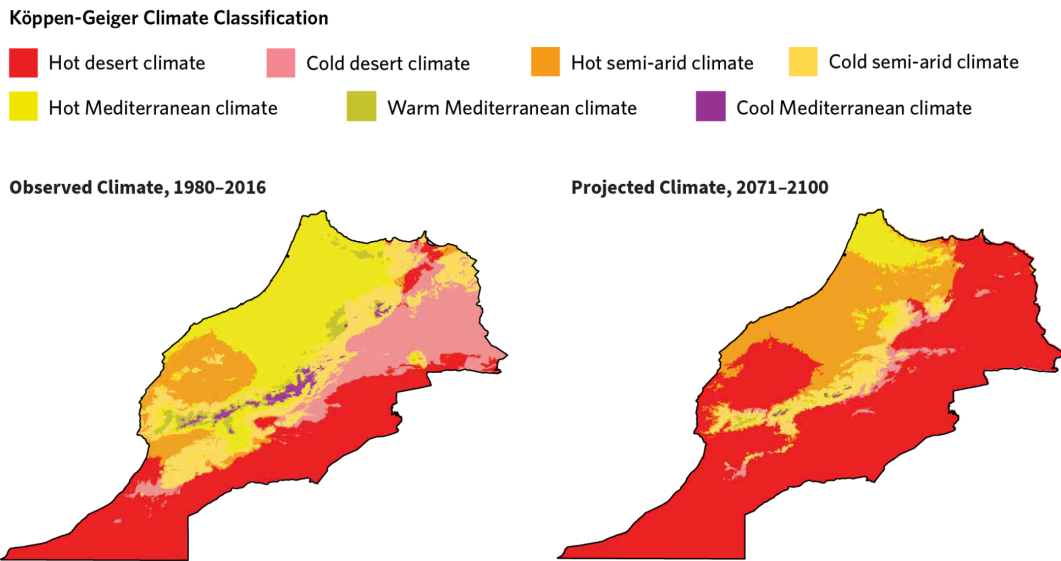
<sup>34</sup> UNCCD, 'UNCCD FAQ: Desertification' (UNCCD, 2025) <https://www.unccd.int/unccd-faq> accessed 14 July 2025.

<sup>35</sup> UNDP, *Morocco: Country Briefing on the National Adaptation Plan Process* (UNDP 2017) [https://www.adaptation-undp.org/sites/default/files/resources/morocco\\_nap\\_country\\_briefing\\_final.pdf](https://www.adaptation-undp.org/sites/default/files/resources/morocco_nap_country_briefing_final.pdf) accessed 14 July 2025.

<sup>36</sup> World Bank, *Climate Risk Country Profile: Morocco* (World Bank 2021) [https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB\\_Morocco%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB_Morocco%20Country%20Profile-WEB.pdf) accessed 14 July 2025.

<sup>37</sup> Abdessamad Ouhammou and others, 'Desertification in Morocco: Causes, Consequences and Mitigation Strategies' (2023) 14(4) *Land* 837 <https://www.mdpi.com/2073-445X/14/4/837> accessed 14 July 2025.

**Figure 1. Morocco's Climate**



Source: Hylke E. Beck et al., "Present and Future Köppen-Geiger Climate Classification Maps at 1-Km Resolution," *Scientific Data* 5, 180214 (2018), doi: 10.1038/sdata.2018.214.

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CarnegieEndowment.org

*Source: Carnegie Endowment*<sup>38</sup>

Land degradation has the greatest impact on Morocco's rural population, as 80% are employed in the agricultural sector<sup>39</sup>. The predominant farming practice heavily relies on rain-fed crops, which provide two-thirds of the average person's daily calories<sup>40</sup>. As soil fertility drops, food insecurity and poverty in rural areas will rise, which threatens political stability. Seen in the food riots that happened in Casablanca (Morocco's biggest city) between 1981–1984, it led to 600 people and thousands of injured after the national security forces had to get involved<sup>41</sup>.

<sup>38</sup> Hylke E. Beck et al., Present and Future Köppen-Geiger Climate Classification Maps at 1-Km Resolution (*Scientific Data*, 5, 180214, 2018) <https://doi.org/10.1038/sdata.2018.214> accessed 12 October 2025.

<sup>39</sup> Kingdom of Morocco, 'Morocco's Economy Sees 3.8% Growth in 2024' (Maroc.ma, 6 June 2025) <https://www.maroc.ma/en/news/moroccos-economy-sees-38-growth-2024> accessed 14 July 2025.

<sup>40</sup> Will D Swearingen, 'Drought Hazard in Morocco' (1992) 82 *Geographical Review* 401.

<sup>41</sup> Comité d'action contre la répression au Maroc, Casablanca: Le soulèvement populaire du 6 juin 1981 (Les comités 1983).

The cost of land degradation is estimated to be \$2.1 billion, which is 3.5% of the country's GDP each year<sup>42</sup>. The figure accounts for losses in agricultural and grazing productivity, as well as land-use changes<sup>43</sup>.

The King is particularly concerned about the socio-economic effects of desertification on Morocco's population. It underscores the economic burden and potential political unrest led by increased food insecurity from land loss.

## **Environmental Challenge #2: Extreme weather events**

Extreme weather events are defined as unusual characteristics in terms of magnitude, location, and time that deviate significantly from the average weather pattern of a region<sup>44</sup>. In this section, extreme weather events in Morocco will be explored, with a focus on the water cycle: floods, droughts, and rainfall patterns. Extreme weather events are a significant concern in Morocco, given the arid climate and reliance on water resources for the agriculture and tourism sectors. The agribusiness is the largest consumer of water, utilising approximately 85% of the total water supply, which translates to 11–15 billion cubic meters of water annually<sup>45</sup>. Tourism, whilst precise figures are inconsistent, is also known for its high share of water depletion, particularly from swimming pools, spas, and landscaped resorts<sup>46</sup>.

### Floods

Morocco has experienced significant floods as a result of a changing climate, with flash floods becoming more frequent due to hotter air holding more moisture, combined with overall drier conditions<sup>47</sup>. Between the years 1980–2020, floods have been the leading natural hazard in the country, as seen in the graph below.

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<sup>42</sup> Statista, 'Agricultural Production in Morocco in 2020, by Product (in Million Metric Tons)' (Statista, 2022)

<https://www.statista.com/statistics/1302570/agricultural-production-in-morocco-by-product/> accessed 20 July 2025.

<sup>43</sup> Anas Laamouri and Abdellatif Khattabi, 'Estimating the Economic Cost of Land Degradation and Desertification in Morocco' (2025) 14 Land 837 <https://doi.org/10.3390/land14040837>.

<sup>44</sup> World Meteorological Organization, 'Extreme Weather' (WMO) <https://public.wmo.int/topics/extreme-weather> accessed 20 July 2025.

<sup>45</sup> World Bank, Water Scarcity in Morocco: Analysis of Key Water Challenges (World Bank 2019) <https://documents1.worldbank.org/curated/en/642681580455542456/pdf/Water-Scarcity-in-Morocco-Analysis-of-Key-Water-Challenges.pdf> accessed 20 July 2025.

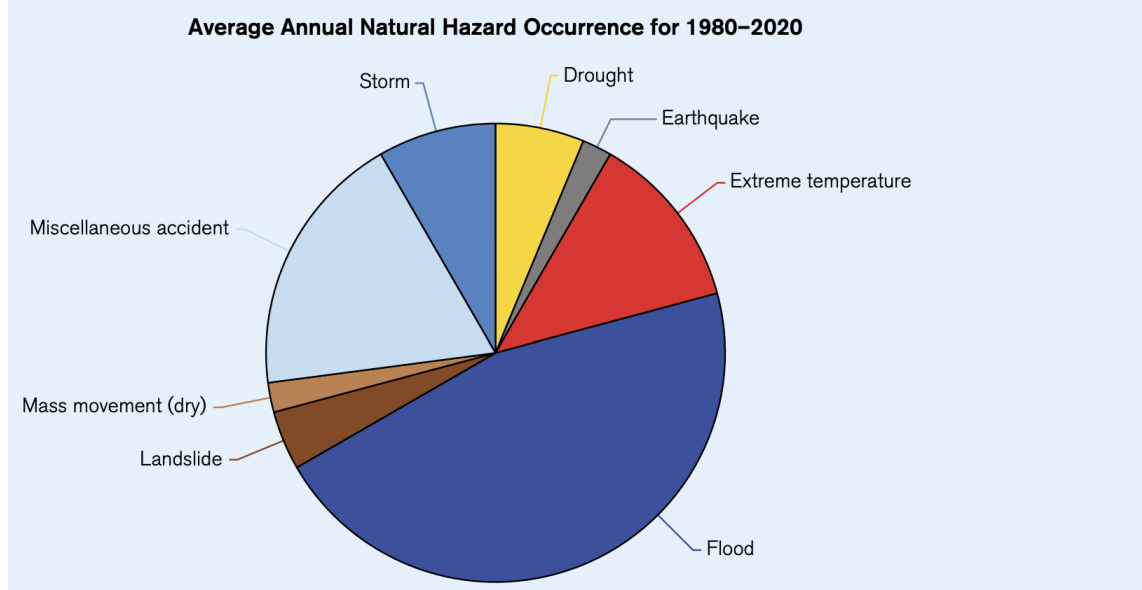
<sup>46</sup> IREF Europe, 'How Misplaced Government Policies Fueled Morocco's Water Crisis' (IREF, 29 February 2024)

<https://en.irefeurope.org/publications/online-articles/article/how-misplaced-government-policies-fueled-moroccos-water-crisis/> accessed 20 July 2025.

<sup>47</sup> World Bank, Morocco Climate Risk Country Profile (2021)

[https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB\\_Morocco%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB_Morocco%20Country%20Profile-WEB.pdf) accessed 20 July 2025.

**FIGURE 8.** Natural Disaster Classification in Morocco (1980–2020) based on EM-DAT Data



Source: *The World Bank*<sup>48</sup>

The region most affected and continuing to be in the future is Tanger-Tétouan-Al Hoceima, the northernmost region of Morocco, where 70% of the population is already affected. Floods are projected to increase by 31% in 2050 and 85% in 2080. It has led to the destruction of agricultural lands, grazing areas, and crops, intensifying food shortages and economic hardships.

### Droughts

Morocco is entering its sixth consecutive year of drought in 2025, according to the African Development Bank Group<sup>49</sup>. The country is already vulnerable to droughts characterised by its overall dry climate, with the yearly maximum number of consecutive wet days (>1 mm) rarely exceeding more than 10<sup>50</sup>. In 2024, the regions of Morocco that were primarily affected by drought were in Béni Mellal-Khénifra (mountain region), with the average consecutive dry period spanning a month, in the northern regions two months, and in the southern Souss-Massa more than four months.

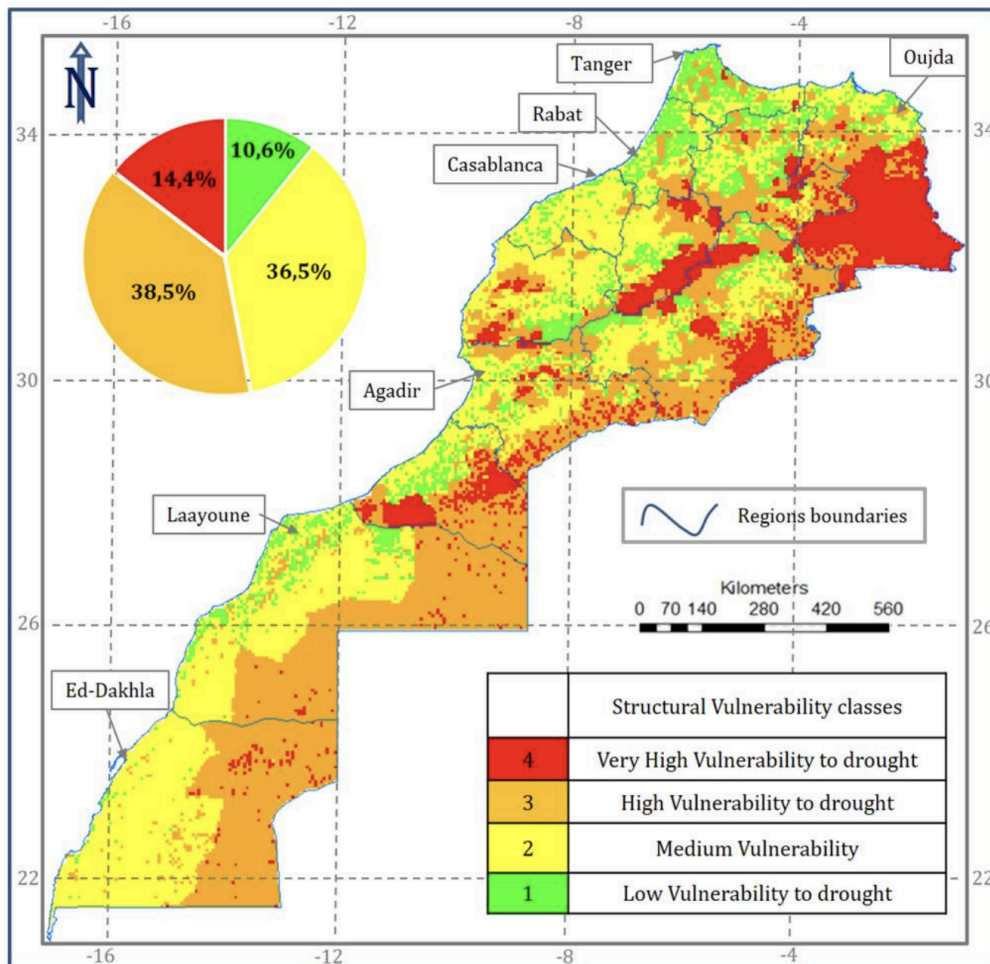
Currently, 80% of Morocco's population is exposed to prolonged droughts, and it is expected to intensify. The maximum number of consecutive dry days is

<sup>48</sup> The World Bank, Natural Disaster Classification in Morocco (1980–2020) based on EM-DAT Data (The World Bank, 2020) <https://www.emdat.be> accessed 12 October 2025.

<sup>49</sup> African Development Bank, 'Hydric Stress: A Major Concern in Morocco' (AfDB, 15 February 2023) <https://www.afdb.org/en/news-and-events/interviews/hydric-stress-major-concern-morocco-69585> accessed 20 July 2025.

<sup>50</sup> World Bank, Morocco Climate Risk Country Profile (2021) [https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB\\_Morocco%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB_Morocco%20Country%20Profile-WEB.pdf) accessed 20 July 2025.

projected to increase by an average of 1.29 days per decade in the period 2000–2050. Meaning drought periods will lengthen during the summer and encroach into spring and fall, leading to a larger proportion of people exposed to drought. This is especially evident in the coastal regions of Tanger-Tétouan-Al Hoceima, Rabat-Salé-Kénitra, and Casablanca-Settat (seen in the map below)<sup>51</sup>.



Source: *International Journal of Engineering and Geosciences*<sup>52</sup>

These regions will undergo the harshest consequences as drought durations are expected to increase by 2 days per decade over the same period, causing an

<sup>51</sup> Hicham Ouchene, Abdelaziz El Adnani and Mohamed El Fels, 'Spatiotemporal Assessment of Drought Severity and Its Impact on Agricultural Land Use in Morocco between 2000 and 2020' (2024) 16(1) *Anatolian Journal of Agriculture*

<https://dergipark.org.tr/en/download/article-file/3597964> accessed 20 July 2025.

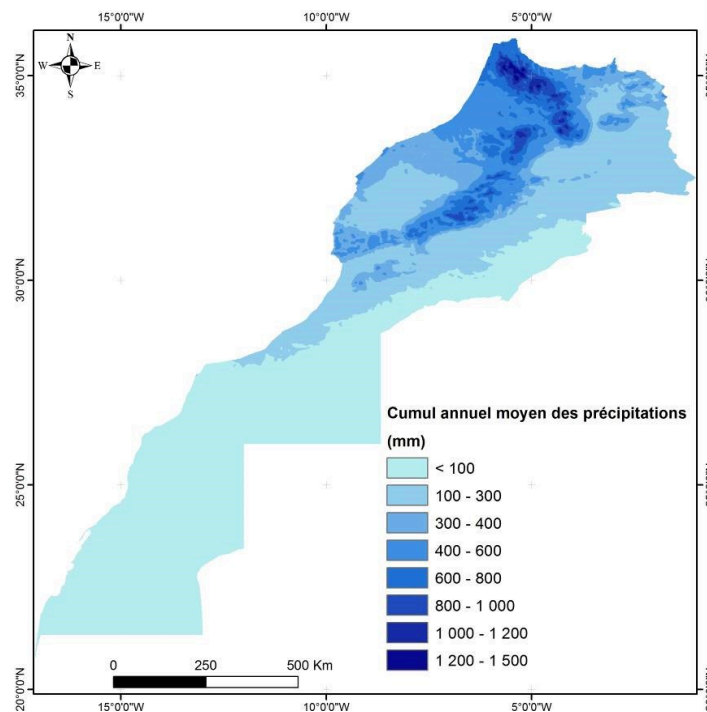
<sup>52</sup> *International Journal of Engineering and Geosciences*, "Structural Vulnerability to Drought in Morocco" (IJOEG, 2022) <https://dergipark.org.tr/en/pub/ijegeo> accessed 12 October 2025.

additional 10 dry days over 50 years<sup>53</sup>. This will slow the development process of agriculture and tourism as they are dominant economic sectors in these regions<sup>54</sup>.

### Change in rainfall patterns

Morocco experiences a diverse range of precipitation patterns, which are expected to shift towards extremes as a result of climate change. This will result in some areas experiencing floods, while others will experience prolonged periods of drought.

To illustrate this point, the northern region is characterised by significant rainfall, with an average of over 600mm per year in 2024. In contrast, the south region has much lower precipitation, with an average of under 100mm per year, as shown in the map below<sup>55</sup>.



Source: *Encyclopedia of the Environment*<sup>56</sup>

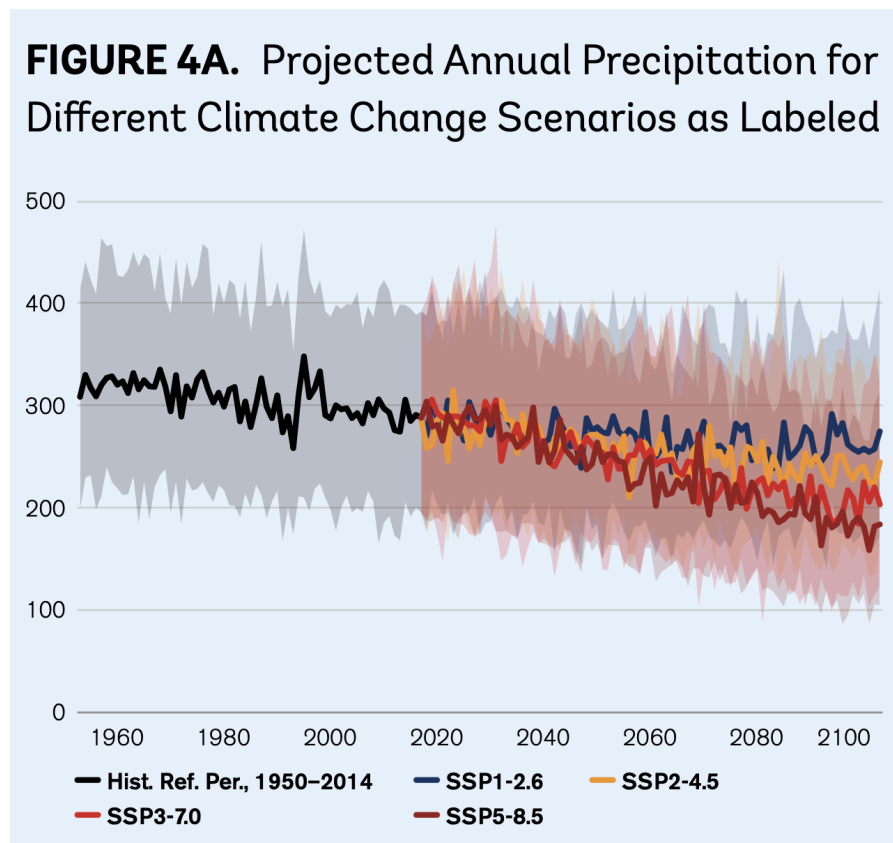
<sup>53</sup> Abdellatif Soudi, Jamal Benaabidate and Azzouz El Midaoui, 'Temporal Trends in Extreme Temperature and Precipitation Events in an Arid Area: Case of Chichaoua-Mejjate Region, Morocco' (2020) [https://www.researchgate.net/publication/342810095\\_Temporal\\_trends\\_in\\_extreme\\_temperature\\_and\\_precipitation\\_events\\_in\\_an\\_arid\\_area\\_case\\_of\\_Chichaoua\\_Mejjate\\_region\\_Morocco](https://www.researchgate.net/publication/342810095_Temporal_trends_in_extreme_temperature_and_precipitation_events_in_an_arid_area_case_of_Chichaoua_Mejjate_region_Morocco) accessed 20 July 2025.

<sup>54</sup> Oxford Business Group, 'A Unique Position: Geography and Demographics Drive the Economic Story' (OBG, 2016) <https://oxfordbusinessgroup.com/reports/morocco/2016-report/economy/a-unique-position-geography-and-demographics-drive-the-economic-story> accessed 20 July 2025.

<sup>55</sup> Abdelghani Chehbouni, 'Climate in Morocco' *Encyclopédie de l'Environnement* (15 January 2021) <https://www.encyclopedie-environnement.org/en/climate/climate-morocco/> accessed 20 July 2025.

<sup>56</sup> Encyclopedia of the Environment, "Average Annual Precipitation in Morocco" (EoE, 2023) <https://www.encyclopedie-environnement.org> accessed 12 October 2025.

There is greater uncertainty regarding precipitation than temperature, which is easier to predict in the long term for Morocco. The World Bank suggests that the country will experience a significant decrease in precipitation, from 298.29 mm (1995–2014, historical scenario) to 255.22 mm (2040–2059, foreseen scenario) as illustrated in the following graph<sup>57</sup>. The region experiencing the greatest changes is the northern parts of Morocco, which are ominous for their agricultural hotspots and tourist destinations.



Source: *The World Bank*<sup>58</sup>

King Mohammed VI cares because such extreme weather events have a significant socio-economic impact. Furthermore, the adverse effects of weather events on the local economy are multifaceted. These include the disruption of agricultural activities and the further development of tourism (due to insufficient or excessive water). In the agricultural sector, the current farming system will not be able to sustain the water scarcity, as the traditional practices require 150 millimeters of water before being able to start plowing<sup>59</sup>. The average annual

<sup>57</sup> World Bank, *Climate Risk Country Profile: Morocco* (World Bank 2021)

[https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB\\_Morocco%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/17189-WB_Morocco%20Country%20Profile-WEB.pdf) accessed 14 July 2025.

<sup>58</sup> The World Bank, *Projected Annual Precipitation for Different Climate Change Scenarios* (The World Bank, 2022) <https://www.worldbank.org> accessed 12 October 2025.

<sup>59</sup> K EM Cleaver, *The Agricultural Development Experience of Algeria, Morocco, and Tunisia: A Comparison of Strategies for Growth* (World Bank 2025)

<https://documents.worldbank.org/pt/publication/documents-reports/documentdetail/19575146>

decrease in precipitation will affect the productivity of crop output, hence the agribusiness will become a risky venture in the future<sup>60</sup>. Moreover, an uncertain water supply will slow future development in the tourism sector. Tourism is water-intensive and will contribute to rising regional water demand, especially as initiatives like 'Plan Azur' push investments into 5-star resorts<sup>61</sup>. These resorts require large amounts of water for swimming pools, spas, and landscaped grounds. The government's goal with Plan Azur is to position Morocco among the top 20 holiday destinations, but this ambition will put further strain on water resources<sup>62</sup>. In addition to affecting the local economy, it may also give rise to other social problems, including poverty, malnutrition, and food insecurity.

### **Environmental Challenge #3: Rising Sea Level**

Morocco is at significant threat to sea level rise because of its low-lying coastal regions. Predictions indicate that a sea level rise of 4 meters could inundate approximately 10% of the country's area, and a rise of 11 meters could affect over 24% of the coastal regions<sup>63</sup>. This is particularly difficult, seeing that about 60-65% of the population lives by the coast<sup>64</sup>, whose livelihood depends on agriculture and tourism in these areas. Increased salinity intrusion from the sea adversely affects agricultural productivity and freshwater resources, further exacerbating food and water security issues. The potential displacement of up to 146,000 people from coastal regions due to rising sea levels underscores the severe socio-economic impacts of this challenge<sup>65</sup>.

Effective adaptation measures, such as assessing risks, building coastal defenses, and relocating infrastructure, are crucial to mitigate these impacts<sup>66</sup>. However, the

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8773979263/the-agricultural-development-experience-of-algeria-morocco-and-tunisia-a-comparison-of-strategies-for-growth.

<sup>60</sup> Isabel Tsakok, Morocco's Agriculture, Climate Change and Food Security: Challenges and Opportunities (Policy Center for the New South 2023)  
[https://www.policycenter.ma/sites/default/files/2023-05/PP\\_06-23%20%28Tsakok%29\\_0.pdf](https://www.policycenter.ma/sites/default/files/2023-05/PP_06-23%20%28Tsakok%29_0.pdf)  
accessed 14 July 2025.

<sup>61</sup> 'National Adaptation Plan Process in Focus: Lessons from Morocco' (UNDP 2018)  
<https://www.undp.org/publications/national-adaptation-plan-process-focus-lessons-morocco>  
accessed 1 July 2025.

<sup>62</sup> Vera Tekken, Luis Costa and Juergen P Kropp, 'Increasing Pressure, Declining Water and Climate Change in Northeastern Morocco' (2013) 17 *Journal of Coastal Conservation* 379  
<https://www.jstor.org/stable/42657030>.

<sup>63</sup> O Zerhouni, J Vandenberghe and D Van Meent, 'Impacts of Sea-Level Rise on the Moroccan Coastal Zone' (2008) *Science of the Total Environment*  
<https://www.sciencedirect.com/science/article/abs/pii/S0169555X08004960> accessed 21 July 2025.

<sup>64</sup> World Bank, *Disappearing Coasts in the Maghreb: Coastal Erosion and Its Costs* (World Bank, 28 September 2021)  
<https://www.worldbank.org/en/country/morocco/publication/disappearing-coasts-in-the-maghreb-coastal-erosion-and-its-costs> accessed 22 July 2025.

<sup>65</sup> Concern Worldwide, 'Climate Refugees Explained' (Concern Worldwide, 12 February 2024)  
<https://www.concern.net/news/climate-refugees-explained> accessed 24 July 2025.

<sup>66</sup> Concern Worldwide, 'Climate Refugees Explained' (Concern Worldwide, 12 February 2024)  
<https://www.concern.net/news/climate-refugees-explained> accessed 24 July 2025.

consequences of rising sea levels could nullify decades of development investments, drastically altering the landscape and socio-economic conditions of the affected areas. This challenge necessitates robust leadership and international support to implement sustainable adaptation strategies.

As sea levels rise the most vulnerable sector is agricultural, especially coastal agriculture, which is prone to soil salinity and inundation. This poses a drastic risk to food security internally and the livelihoods of millions of people dependent on agriculture for both economic and nutritional reasons. Moreover, the development of the tourism sector will struggle to flourish with necessary adaptation measures having to be implemented beforehand, the Moroccan government has begun an emergency plan of €200 million to support the risk of rising sea levels<sup>67</sup>.

## **The Defining Moment**

In the pursuit of analyzing King Mohammed VI as a potential climate leader, it is important to reflect on specific moments in his life that define his values and commitments. **For Morocco's King Mohammed VI, this moment was the COP22 hosted in Marrakech in 2016.** Before the conference, Mohammed VI was mainly known as a development-oriented monarch, implementing economic reforms and infrastructure expansions. By hosting the COP22, one year after the Paris agreement, he effectively shifted the narrative from being a development and security-oriented leader to a climate actor, emerging on the international stage as a climate frontrunner.

The King framed the COP22 as “a decisive turning point in the implementation process of the historic Paris Agreement,”<sup>68</sup>, urging the international community to act not only through promises, but rather tangible initiatives and practical steps that support developing nations. In his speech, he highlighted that holding the conference on the continent of Africa was “an incentive for us to give priority to tackling the adverse repercussions of climate change, which are growing worse and worse in the countries of the South,”<sup>69</sup> which are more prone to the consequences of climate change. This moment marked the symbolic and substantive shift of King Mohammed VI's position from just a domestic development oriented leader to a climate leader.

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<sup>67</sup> 'Morocco Welcomes Back Visitors— and Investors' (World Finance, 2025)  
<https://www.worldfinance.com/markets/morocco-welcomes-back-visitors-and-investors>  
accessed 24 July 2025.

<sup>68</sup> King Mohammed VI, 'Full Speech of HM the King on COP22 High-Level Segment | Maroc.ma' (Maroc.ma 26 June 2025)  
<<https://www.maroc.ma/en/royal-speeches-and-messages/royal-speeches/full-speech-hm-king-cop22-high-level-segment>>.

<sup>69</sup> King Mohammed VI, Full Speech of HM the King on COP22 High-Level Segment, (n 1)

COP22 additionally amplified Morocco's climate agenda internationally. King Mohammed VI leveraged the spotlight of the COP22 to highlight Africa's climate needs and positioned himself as a voice for Africa and the global south. On the summit's sidelines, the King convened the first Africa Action Summit, gathering African heads of state to create a common and shared stance on climate change. He implored the heads of state to speak united with one voice when demanding climate justice and mobilizing their resources for adaptation initiatives<sup>70</sup>.

During the opening of the COP22, the King called for the wealthy countries to honor their financing pledge and for all the parties to uphold the principle of common but differentiated responsibilities in tackling climate change<sup>71</sup>. These efforts did not go unnoticed, as international observers and press praised Morocco for making COP22 an "African COP" and creating a strong representation of African nations for the negotiations<sup>72</sup>. The UN Secretary General Ban Ki-moon personally thanked King Mohammed VI for convening the conference in Marrakech and applauded Morocco as a "great example [...] making sustainable development and championing climate change actions"<sup>73</sup>. Years later, the director of the U.S. Agency for International Development issued a statement praising Morocco as a "model of progress," commending their structural reforms and ambitious projects<sup>74</sup>, affirming Morocco's important position as a partner in the international fight against climate change, because of the King's leadership. Thus, hosting the COP22 significantly elevated King Mohammed VI's diplomatic influence and reputation, solidifying his role as a leading climate advocate for Africa and the developing world.

Additionally, COP22 witnessed the synchronization of Morocco's national project development with climate diplomacy. The conference provided Mohammed VI with a platform to present Morocco's proposals for sustainable development and

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<sup>70</sup> William Nana, 'Full Text: Morocco King's Royal Address at the Africa Action Summit at COP22 Marrakech' (*Modern Ghana* 18 November 2016)  
<<https://www.modernghana.com/news/736889/full-text-morocco-kings-royal-address-at-the-africa-action.html>>

<sup>71</sup> King Mohammed VI, Full Speech of HM the King on COP22 High-Level Segment, (n 1)

<sup>72</sup> Celeste Hicks, 'Morocco Lights the Way for Africa on Renewable Energy' *The Guardian* (17 November 2016)

<<https://www.theguardian.com/global-development/2016/nov/17/cop22-host-morocco-lights-way-africa-renewable-energy-2020>>

<sup>73</sup> The Moroccan American Center for Policy, 'At COP22, King Mohammed vi Urges Tangible Initiatives, Practical Steps, Respect and Support for Developing Countries' (*GlobeNewswire News Room* 17 November 2016)

<<https://www.globenewswire.com/news-release/2016/11/17/1306666/0/en/At-COP22-King-Mohammed-VI-Urges-Tangible-Initiatives-Practical-Steps-Respect-and-Support-for-Developing-Countries.html>>

<sup>74</sup> USAID Director Praises Morocco as a "Model of Progress" and "Force for Peace" under the Reign of HM King Mohammed VI (*EMBASSY OF THE KINGDOM OF MOROCCO IN THE UNITED STATES* 2024)

<<https://us.diplomatie.ma/en/usa-id-director-praises-morocco-model-progress-and-force-peace-under-reign-hm-king-mohammed-vi>>

renewable energy as a template for the developing world. Indeed, long before 2016, the King had initiated and integrated the National Energy Strategy in 2009<sup>75</sup>, to counter import dependence and initiate green growth. This plan established ambitious goals for renewable energy, originally 42% of installed capacity by 2020, later increased to 52% by 2030<sup>76</sup>, supported by large investments in solar, wind, and hydro power projects. Morocco's climate pledge, NDC, to the Paris Agreement in 2015 promised to reduce emissions by 32% below business as usual by 2030<sup>77</sup>.

During the COP22, those plans were already taking shape. King Mohammed VI had inaugurated the first phase of the Noor solar power complex, one of the largest in the world, in early 2016<sup>78</sup>. Morocco has also launched other flagship green projects, ranging from prohibiting plastic bags to debuting Africa's first electric bus, to advancing its green reputation<sup>79</sup>. Presenting these green initiatives at the conference in Marrakech provided concrete credibility to Morocco's climate agenda. Observers commented that COP22 was "an occasion for Morocco to showcase its modern infrastructure and renewable energy plans, which include an investment of over US\$45 billion in the next 10 years in adaptation and mitigation"<sup>80</sup>, a size unprecedented among other developing countries.

The successful hosting of the COP22 thus seamlessly intertwined Morocco's national development agenda with its climate diplomacy. It highlighted that the same projects powering national development, including the Noor power plant and wider clean energy projects<sup>81</sup>, were also fundamental instruments in global climate action. In this defining moment, King Mohammed VI rebranded his legacy by aligning Morocco's future with the world's future, emerging as a climate leader who connects local development with global progress.

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<sup>75</sup> Case Study on Policy Reforms to Promote Renewable Energy in Morocco' (*United Nations Economic and Social Commission for Western Asia* 30 August 2018) <<https://archive.unescwa.org/publications/policy-reforms-promote-renewable-energy-morocco>>.

<sup>76</sup> International Energy Agency, 'Morocco Renewable Energy Target 2030 – Policies' (*IEA* 10 October 2019) <<https://www.iea.org/policies/6557-morocco-renewable-energy-target-2030>>.

<sup>77</sup> Celeste Hicks, 'Morocco Lights the Way for Africa on Renewable Energy' *The Guardian* (17 November 2016) <<https://www.theguardian.com/global-development/2016/nov/17/cop22-host-morocco-lights-way-africa-renewable-energy-2020>>.

<sup>78</sup> Celeste Hicks, 'Morocco Lights the Way for Africa on Renewable Energy', (n 25)

<sup>79</sup> Celeste Hicks, 'Morocco Lights the Way for Africa on Renewable Energy', (n 25)

<sup>80</sup> Liesl Louw-Vaudran, 'King Mohammed vi Woos African Leaders at COP22 | ISS Africa' (*ISS Africa* 2016) <<https://issafrica.org/iss-today/king-mohammed-vi-woos-african-leaders-at-cop22>>.

<sup>81</sup> Karim Choukri, Ahmed Naddami and Sanaa Hayani, 'Renewable Energy in Emergent Countries: Lessons from Energy Transition in Morocco' (2017) 7 *Energy, Sustainability and Society*.

## **King Moahmmed VI's Solutions**

This section will explore the solutions that King Mohammed VI proposed to face the aforementioned climate challenges. In the policies, he addresses the adverse effects on the local community and economy in Morocco.

### **1st Policy: Green Morocco Plan (GMP)**

Launched in 2008 under King Mohammed VI's guidance, the Green Morocco Plan was conceived in the wake of the 2007-2008 global food crisis, which was triggered by poor harvests, higher prices for oil, and rising prices of commodities, thus hitting urban poor households the hardest and highlighting Morocco's dependence on food imports<sup>82</sup>. This prompted the creation of the Green Morocco Plan as a strategy to transform Moroccan agriculture<sup>83</sup>. The plan's design was explicitly two-pronged, aiming to "promote socio-economic development through agriculture" by both modernizing large-scale commercial farming and uplifting smallholders<sup>84</sup>. Pillar I of the plan focused on encouraging agricultural business investment by extensively increasing the scale of export-led agriculture. Pillar II was "solidarity" oriented, intended to support small-scale farmers in regions with less developed agricultural infrastructure through subsidies, crop diversification, and cooperative development<sup>85</sup>. In this way, the Plan sought to strike a balance between major high-yielding projects and "subsistence, cooperative farming", in the words of King Mohammed VI, so that productivity gains would also translate into rural poverty reduction<sup>86</sup>.

The Green Morocco Plan goals were correspondingly ambitious. It targeted a doubling of agricultural GDP from around MAD 60 billion to 90 billion. Within a decade, it created 1.5 million new jobs, and a two to three times increase in rural incomes, for three million people<sup>87</sup>. Food security and export competitiveness were both emphasized.

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<sup>82</sup> Gabriel Huppé and others, 'Food Price Inflation and Food Security: A Morocco Case Study L'inflation Des Prix Des Aliments et La Sécurité Alimentaire : Une Étude de Cas Du Maroc' (2013) <[https://www.iisd.org/system/files/publications/food\\_price\\_inflation\\_morocco.pdf](https://www.iisd.org/system/files/publications/food_price_inflation_morocco.pdf)>.

<sup>83</sup> The Green Morocco Plan: The Major Principles and Advances of Morocco's Agricultural Strategy' (2016) <[https://www.inter-reseaux.org/wp-content/uploads/bds\\_no20\\_plan\\_maroc\\_vert\\_en.pdf](https://www.inter-reseaux.org/wp-content/uploads/bds_no20_plan_maroc_vert_en.pdf)>.

<sup>84</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) <<https://www.theguardian.com/global-development/2015/oct/27/morocco-food-security-un-special-rapporteur-hilal-elver-plan-maroc-vert>>.

<sup>85</sup> 'The Green Morocco Plan: The Major Principles and Advances of Morocco's Agricultural Strategy' (2016) (n. 30)

<sup>86</sup> King Mohammed VI, 'Full Text of HM the King's Speech to Nation on 61st Anniversary of King and People's Revolution Day | Maroc.ma' (*Maroc.ma* 4 July 2025) <<https://www.maroc.ma/en/royal-speeches-and-messages/royal-speeches/full-text-hm-kings-speech-nation-61st-anniversary-king-and-peoples-revolution-day>>.

<sup>87</sup> Hasnae Benjaafar and others, 'REVIEW: Green Morocco Plan and Moroccan Legislation for the Socioeconomic and Sustainable Development of Agricultural Cooperatives: Challenges and Prospects' (2024) 527 E3S Web of Conferences.

The Plan aimed to boost agricultural food exports to MAD 44 billion by 2020, capitalize on Morocco's advantage in fruits and vegetables, high-value crops, and reduce reliance on grain imports<sup>88</sup>. At the same time, it supported sustainable practices, notably a National Program for Irrigation Water Savings, with massive public investment in drip irrigation technology to combat water scarcity<sup>89</sup>. From the outset, King Mohammed VI positioned the Green Morocco Plan as central to Morocco's development trajectory: it formed part of a broader "comprehensive, sustainable development model" alongside parallel initiatives in fisheries and renewable energy<sup>90</sup>.

The plan's launch marked a strategic reorientation back toward agriculture as an engine of growth and social progress, with the King's endorsement ensuring coordination and the mobilization of substantial resources, including public-private partnerships and external funding, to fulfill its vision<sup>91</sup>. In sum, the Green Morocco Plan was the flagship solution advanced by the King Mohammed VI government to modernize agriculture, bolster climate resilience, and create rural development in Morocco from 2008 to 2020.

## **2nd Policy: Act 81-12**

Morocco is vulnerable to sea level rise as 60-65% of the population lives by the coast, whose livelihood depends on agriculture and tourism<sup>92</sup>. These sectors are volatile to the climatic changes from salinity intrusion and land degradation, posing a risk to water security and infrastructure<sup>93</sup>. To cope with the detrimental effects of rising sea level, King Mohammed V implemented Act 81-12<sup>94</sup>.

Act 81-12 was integrated in 2015 with a focus on three main pillars: (a) the establishment of a framework for integrated coastal governance; (b) the

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<sup>88</sup> 'The Green Morocco Plan: The Major Principles and Advances of Morocco's Agricultural Strategy' (2016) (n. 30)

<sup>89</sup> Amal Ennabih, 'Running out of Water – MIPA Institute' (*Mipa.institute* 16 September 2020) <<https://mipa.institute/?p=9349&lang=en>>.

<sup>90</sup> King Mohammed VI, 'Full Text of HM the King's Speech to Nation on 61st Anniversary of King and People's Revolution Day | Maroc.ma' (*Maroc.ma* 4 July 2025) (n. 33)

<sup>91</sup> 'The Green Morocco Plan: The Major Principles and Advances of Morocco's Agricultural Strategy' (2016) (n. 30)

<sup>92</sup> World Bank, Morocco Country Profile: Climate Risk (Climate Knowledge Portal, World Bank, c 2021)

[https://climateknowledgeportal.worldbank.org/sites/default/files/2021-09/15725-WB\\_Morocco%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-09/15725-WB_Morocco%20Country%20Profile-WEB.pdf) accessed 20 August 2025.

<sup>93</sup> M Snoussi and others, 'Vulnerability assessment of the impact of sea-level rise and flooding on the Moroccan coast: The case of the Mediterranean eastern zone' (2008) 77 *Estuarine, Coastal and Shelf Science* 206.

<sup>94</sup> Law No 81-12 relating to the coastal zone (Morocco), Official Gazette No 6404, 15 October 2015; Decree No 2-15-769 (Morocco), Official Gazette No 6428, 7 January 2016 [https://legal.un.org/ilc/sessions/74/pdfs/english/slr\\_morocco.pdf](https://legal.un.org/ilc/sessions/74/pdfs/english/slr_morocco.pdf) accessed 20 August 2025.

protection and restoration of coastal ecosystems; and (c) the enhancement of the resilience of coastal areas to climate change<sup>95</sup>.

The first aspect of the policy is integrated coastal governance, which aims to balance development and conservation efforts for Morocco's coastline. Several mechanisms have been implemented, for instance, the tiered planning system, which ensures that all planning levels are incorporated when measuring coastal protection. More precisely, in 2016, the National Coastal Commission, alongside independent regional commissions, was created to voice both national and local concerns<sup>96</sup>. This also included the participation of sectoral ministries (housing, infrastructure, tourism), businesses, and civil society. This system allows stakeholders to collaborate and achieve equitable management of coastal zones<sup>97</sup>.

The second addresses the protection of coastal ecosystems, aiming to mitigate the adverse effects of rising sea level, which is salinity intrusion, coastal erosion, and pollution. Coastal ecosystem protection includes identifying the biological and ecological equilibrium of the coast and safeguarding damaged zones. For instance, stringent regulations are in place to protect coastal ecosystems like the prohibition of significant infrastructure of roads and railways within 2 kilometres of the shoreline. Additionally, 100 meters needs to be accounted for between the shore and any buildings. The man-made buffer zones to preserve the natural barriers to protect itself from water intrusion and safeguard the shoreline from further land erosion. Another aspect of the policy is equitable use of coastal resources, it prohibits the discharge of any pollutant material along shorelines. The sustainable coastal plans entail a strong environment to combat rising sea level, water intrusion, and erosion<sup>98</sup>.

The last pillar, climate resilience and adaptation is closely tied to the previous point. Planners forecast climate risks, such as severe weather and rising sea levels to manage its effects in the future. It also fosters the development of new ideas and research that will contribute to the preservation of the coast's health. Additionally, the commissions that have been established involve the

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<sup>95</sup> Law No 81-12 relating to the coastal zone (Morocco), Official Gazette No 6404, 15 October 2015; Decree No 2-15-769 (Morocco), Official Gazette No 6428, 7 January 2016 [https://legal.un.org/ilc/sessions/74/pdfs/english/slr\\_morocco.pdf](https://legal.un.org/ilc/sessions/74/pdfs/english/slr_morocco.pdf) accessed 20 August 2025.

<sup>96</sup> Law No 81-12 relating to the coastal zone (Morocco), Official Gazette No 6404, 15 October 2015; Decree No 2-15-769 (Morocco), Official Gazette No 6428, 7 January 2016 [https://legal.un.org/ilc/sessions/74/pdfs/english/slr\\_morocco.pdf](https://legal.un.org/ilc/sessions/74/pdfs/english/slr_morocco.pdf) accessed 20 August 2025.

<sup>97</sup> United Nations Environment Programme, Integrated Coastal Zone Management in Morocco (UNEP 2018).

<sup>98</sup> N Er-Ramy and others, 'Coastal Health of the Moroccan Mediterranean Coast' (2025) 14 Land 1279 <https://www.mdpi.com/2073-445X/14/6/1279> accessed 20 August 2025.

consideration of local expertise and community needs to develop solutions that benefit everyone<sup>99</sup>.

The 2015 policy laid a great foundation for King Mohammed VI to focus on anthropogenic global warming induced issues, which tie climate change policies with the development of the country. The policy acknowledges that coastal regions in Morocco are populated and an economic hub<sup>100</sup>. Moahmmed VI wanted to face these challenges through this policy since he recognised potential saving of national capital by optimising the previously mentioned key aspects, as well as further investment into the country's development<sup>101</sup>.

### **3rd Policy: National Adaptation Plan (NAP1)**

The National Adaptation Plan (NAP) was an initiative started by the United Nations Framework Convention on Climate Change (UNFCCC) in 2010<sup>102</sup>. Shortly followed in 2016, Morocco's National Adaptation Plan (NAP1) committed to spending 15 percent of its overall investment budgets, an approximate of 36 billion USD will be spent between 2020 and 2030<sup>103</sup>. The policy will tackle Morocco's most vulnerable sectors to climate change, including water, forestry, and agriculture. In order to tackle climate change, Morocco must undergo modernization to ensure that poverty, political unrest, and socio-economic development do not hinder its successes<sup>104</sup>. The NAP1 has been designed to do exactly this by addressing these elements in a five-pillar climate strategy plan. It highlights the importance of institutions, scientific research, societal resilience, vulnerability mitigation, adaptive ecosystems, and economic durability. The policy places King Mohammed VI as a climate leader driven by a strategic vision that links environmental action to national security, development, and economic transformation<sup>105</sup>.

The first pillar, strong institutions, highlights the importance of governance. Morocco needs to modernize its existing framework to successfully run the NAP1.

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<sup>99</sup> Intergovernmental Panel on Climate Change, 'Africa' in Climate Change 2022: Impacts, Adaptation and Vulnerability (AR6 WGII, Cambridge University Press 2022).

<sup>100</sup> World Bank, Morocco Country Profile: Climate Risk (Climate Knowledge Portal, World Bank, c 2021)

[https://climateknowledgeportal.worldbank.org/sites/default/files/2021-09/15725-WB\\_Morocco%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-09/15725-WB_Morocco%20Country%20Profile-WEB.pdf) accessed 20 August 2025.

<sup>101</sup> M Snoussi and others, 'Vulnerability assessment of the impact of sea-level rise and flooding on the Moroccan coast: The case of the Mediterranean eastern zone' (2008) 77 Estuarine, Coastal and Shelf Science 206.

<sup>102</sup> United Nations Framework Convention on Climate Change (UNFCCC), 'National Adaptation Plans'

<https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plan>.

<sup>103</sup> Ministry of Energy, Mines and Environment (Morocco), National Climate Plan 2020–2030 (2020) <https://www.environnement.gov.ma>.

<sup>104</sup> Fatima Zahra Taibi, 'Morocco's Climate Policy: Linking Adaptation and Development' (2019) Germanwatch <https://germanwatch.org>.

<sup>105</sup> United Nations Development Programme (UNDP), 'NAP Support to Morocco' (2021) <https://www.adaptation-undp.org>.

The country underwent several changes to achieve the requirements of the UNFCCC<sup>106</sup>. With this goal in mind, the National Committee for Climate Change was created in 2007<sup>107</sup>. Its body formulates, implements, and monitors national policies and strategies related to climate change, enhancing the reliability of progress on a national level. Moreover, a Central Directorate was created within the Ministry of Environment, focusing on climate change, biodiversity, and the green economy<sup>108</sup>. The new frameworks of the constitution allow funding mechanisms and high-level oversight to be possible<sup>109</sup>. Moreover, it shall promote sustainable economic development by protecting the environment and geographic, heritage, cultural, and historical wealth. Nevertheless, critics point out that this system limits local engagement and civil social participation as the government remains overly centralized, thus limiting effective implementation and accountability<sup>110</sup>.

The second pillar, scientific research, sees the value in the importance of science-based adaptation strategies. To assess climate change impacts and vulnerabilities at the national level, Morocco has carried out various studies. The most known are the GIS-based catastrophe risk modelling and the Morocco Natural Hazards Probabilistic Risk Assessment (MnhPRA)<sup>111</sup>. Their measurements allow for an analysis of earthquakes, floods, tsunamis, droughts, and landslides. Further institutions like the Moroccan Competence Centre for Climate Change (4C Morocco) were established to enhance the efficiency of research, innovation, and international collaboration in African outreach<sup>112</sup>. Additionally, factors like gender-sensitive climate data were also implemented in the GIS-based risk assessment. However, shortcomings in technical capacity due to local-level limits and fragmented climate-risk data remain challenges to be improved<sup>113</sup>.

The third axis is vulnerability mitigation; its efforts try to reduce the potential damage caused by climate change to society. The aim is to support the most vulnerable populations during natural disasters like droughts and floods through comprehensive disaster insurance programs and solidarity funds<sup>114</sup>. Whilst

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<sup>106</sup> United Nations Framework Convention on Climate Change (UNFCCC), 'National Adaptation Plans'

<https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans>.

<sup>107</sup> Morocco Ministry of Environment, 'National Committee for Climate Change: Objectives and Composition' (2018) <https://www.environnement.gov.ma>.

<sup>108</sup> Ministry of Energy, Mines and Environment (Morocco), National Climate Plan 2020–2030 (2020) <https://www.environnement.gov.ma>.

<sup>109</sup> Constitution of the Kingdom of Morocco (2011), arts 31–35.

<sup>110</sup> Fatima Zahra Taibi, 'Morocco's Climate Policy: Linking Adaptation and Development' (Germanwatch, 2019) <https://germanwatch.org>.

<sup>111</sup> World Bank, 'Disaster Risk Management in Morocco' (2017) <https://www.worldbank.org>.

<sup>112</sup> 4C Morocco, 'About the Centre' <https://www.4c.ma>.

<sup>113</sup> United Nations Development Programme (UNDP), 'NAP Support to Morocco' (2021) <https://www.adaptation-undp.org>.

<sup>114</sup> Ministry of Finance (Morocco), 'Natural Disaster Risk Insurance Project' (2020) <https://www.finances.gov.ma>.

Morocco invests in resilient infrastructure, vulnerability persists around water resource management. The reason is that too much focus rests on water supply-oriented solutions such as dams and desalination<sup>115</sup>. Scholars believe that a more effective approach would be to shift to demand management and equity-driven resource allocation to prevent an increase in poverty<sup>116</sup>.

The fourth axis, ecosystem resilience, aims to improve the health of the environment as an adaptation method. The 'Forests of Morocco 2020–2030' for instance combats desertification and land degradation by reforestation, sustainable forestry, and community involvement<sup>117</sup>. The project led to positive effects on the ecosystems and fostering new rural employment. Nevertheless, critics point out that climate-induced droughts and wildfires present ongoing challenges<sup>118</sup>. Moreover, caution arises against overly technical solutions, such as energy-intensive desalination, advocating integrated ecosystem management to sustain ecological balance and community equity<sup>119</sup>.

Finally, economic resilience aims to climate-proof key sectors—agriculture, fisheries, tourism, and industry. Morocco's "Génération Green 2020–2030" promotes climate-smart agriculture, advanced irrigation technologies, drought-resistant crops, and renewable energy expansion<sup>120</sup>. These initiatives significantly enhance energy security and economic stability. However, access to adaptation technologies remains uneven, and disadvantaged small farmers and potentially increasing socioeconomic disparities<sup>121</sup>. Targeted subsidies and equitable distribution of resources are necessary to ensure widespread resilience and social cohesion<sup>122</sup>.

In summary, under King Mohammed VI's leadership, NAP1 presents an integrated, ambitious adaptation strategy. While institutional strength and strategic investments position Morocco as a regional climate leader, ensuring sustainability requires addressing persistent vulnerabilities, improving equity in resource management, and promoting inclusive governance<sup>123</sup>.

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<sup>115</sup> Germanwatch, 'Water Stress and Climate Adaptation in North Africa' (2020) <https://germanwatch.org>.

<sup>116</sup> Fatima Zahra Taibi (n 96).

<sup>117</sup> High Commission for Water, Forests and Desertification Control, *Forests of Morocco 2020–2030* (2020) <https://www.eauxetforets.gov.ma>.

<sup>118</sup> UNDP (n 91).

<sup>119</sup> Taibi (n 96).

<sup>120</sup> Ministry of Agriculture, Maritime Fisheries, Rural Development, and Water and Forests, *Génération Green 2020–2030* (2020) <https://www.agriculture.gov.ma>.

<sup>121</sup> UNDP (n 91).

<sup>122</sup> Germanwatch (n 101).

<sup>123</sup> UNFCCC (n 88); Taibi (n 96).

# **King Mohammed VI's Impact**

## **1st Policy: Green Morocco Plan**

The Green Morocco Plan delivered significant gains in agricultural output and value added. Annual agricultural GDP grew to nearly 7% on average during 2008–2018, an improvement from the prior decade's 2% rate<sup>124</sup>, making agriculture a stronger driver of overall economic growth.

Production of key commodities expanded rapidly as olive yields grew 7.4% per year, citrus by 6.3%, and meat by 4–5% annually during the plan's implementation<sup>125</sup>. Higher volumes and improved supply chains boosted exports accordingly. Agricultural export earnings rose by over one third after 2008, reaching around MAD 55 billion by 2018<sup>126</sup>. Notably, an additional 400000 hectares of fruit and olive orchards were planted under the Plan, and irrigated farmland expanded by about 11%<sup>127</sup>, reflecting the plan's emphasis on intensification and water infrastructure.

These changes enhanced agroindustrial value chains. More produce underwent processing or marketing through aggregation schemes linking small farmers to agribusiness, and the sector attracted new private and foreign investment<sup>128</sup>. By most measures, the Plan achieved its core objective of making agriculture a growth engine. For example, Morocco's agricultural value added grew much faster than non-agricultural sectors over the period, and export-oriented horticulture became a pillar of the economy. Furthermore, the emphasis on high-value crops and yield improvements helped Morocco meet certain targets ahead of schedule, such as reaching 500,000 tons of red meat production before 2020<sup>129</sup>.

Morocco's strides in hunger and poverty alleviation during this period have been partly attributed to the Green Morocco Plan's interventions. Rural malnutrition fell significantly. By 2015, only about 4.6% of the rural population was classified as

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<sup>124</sup> 'Green Morocco Plan Increases Morocco's Agricultural Output - Africa 2020 - Oxford Business Group' (*Oxford Business Group* 19 March 2020) <<https://oxfordbusinessgroup.com/reports/morocco/2020-report/economy/bearing-fruit-the-sector-development-plan-makes-concrete-gains-but-challenges-to-reaching-full-potential-persists>>.

<sup>125</sup> Green Morocco Plan Increases Morocco's Agricultural Output - Africa 2020 - Oxford Business Group' (*Oxford Business Group* 19 March 2020)(n. 39)

<sup>126</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>127</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>128</sup> Green Morocco Plan Increases Morocco's Agricultural Output - Africa 2020 - Oxford Business Group' (*Oxford Business Group* 19 March 2020)(n. 39)

<sup>129</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

malnourished, down from over 7% in 1990<sup>130</sup> and Morocco achieved the UN Millennium Development Goal of halving extreme hunger two years early. The FAO lauded the Plan for creating “an irreversible momentum” in Moroccan agriculture and contributing to food security gains unseen in previous decades. Thousands of small farmers benefited from Pillar II projects aimed at diversifying livelihoods, and about 550 community projects were implemented, focusing on improving yields, switching to higher value crops in marginal areas, and supporting micro enterprises.

A cooperative movement flourished under the plan's implementations. Between 2008 and 2020, the number of registered agricultural cooperatives more than doubled as the plan directly encouraged the creation of over 10000 new cooperatives to integrate smallholders into value chains<sup>131</sup>. This led to greater participation of rural communities in agricultural business. For example, local cooperatives began producing and marketing products such as argan oil, olives, and medicinal herbs, giving farmers a stake in downstream processing. King Mohammed VI himself noted that the “balance” between large commercial projects and subsistence farming in the plan was crucial for “improving people’s income”, underscoring its inclusive intent<sup>132</sup>.

Social programmes like rural extension services and vocational training in agriculture also expanded alongside the plan, aiming to make farming more attractive to youth and to build capacity among small producers. By 2020, Morocco's rural poverty rate and food insecurity indicators had improved to the pre-2008 baseline<sup>133</sup>.

Despite these positive impacts, critical assessments of the Green Morocco Plan point to trade-offs between economic growth and equity, and between productivist expansion and environmental sustainability. A critique is that the plan's benefits were unevenly distributed. The majority share of investment flowed into Pillar I mega projects, roughly MAD 150 billion, which was about 85% of total funding, went to large-scale farms and agricultural business initiatives, where only a fraction reached the smallholder-focused Pillar II<sup>134</sup>. This imbalance, observers argue, meant that wealthier commercial farmers and agricultural business firms reaped most of the gains, through better access to land, credit,

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<sup>130</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>131</sup> Hasnae Benjaafar and others, 'REVIEW: Green Morocco Plan and Moroccan Legislation for the Socioeconomic and Sustainable Development of Agricultural Cooperatives: Challenges and Prospects' (2024)(n. 34)

<sup>132</sup> King Mohammed VI, 'Full Text of HM the King's Speech to Nation on 61st Anniversary of King and People's Revolution Day | Maroc.ma' (*Maroc.ma* 4 July 2025) (n. 33)

<sup>133</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>134</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

and technology, while many poor farmers in remote parts saw relatively limited direct support.

The UN Special Rapporteur on the right to food praised Morocco's production gains under the Plan but "cautioned that more needed to be done" to reach marginalized smallholders, especially in uplands and oasis communities. Indeed, by 2020 Morocco still struggled to "leave no one behind" in rural development: gaps persisted in agricultural extension coverage, market access for isolated villages, and financing for small family farms<sup>135</sup>.

Gender and social equity issues also emerged. Research on the plan's income-generating cooperatives found that rural women's empowerment lagged behind the rhetoric. In many cases, women participated as low-paid labor in cooperatives while educated male leaders captured the economic rewards, indicating "women's participation in decision-making (was) virtually non-existent" despite the plan's focus on female inclusion<sup>136</sup>. Such findings temper the narrative of universally shared benefits, suggesting that deeper structural changes are needed to ensure small farmers, laborers, and women fully profit from agricultural modernization.

Environmental and sustainability concerns have likewise been highlighted as a mixed consequence of the Green Morocco Plan. On one hand, the plan promoted climate adaptation measures, for example, subsidising drip irrigation on over 500,000 hectares to improve water efficiency<sup>137</sup> and embraced the concept of sustainable agriculture in its official agenda. These efforts have introduced more advanced irrigation technology and some climate-resilient practices in Moroccan farming. On the other hand, evidence suggests that the intensification paradigm under the plan came with ecological trade-offs. The expansion of drip irrigation often became a means to "produce more crops per drop", rather than reduce water consumption. Subsidized modern irrigation allowed some farmers to expand cultivation into drier areas or switch to thirstier crops, potentially increasing total water extraction from aquifers and reservoirs.

Morocco's groundwater depletion and drought exposure were not resolved during the plan's span, and critics note that agriculture remains highly vulnerable to rainfall variability, as nearly 60% of cultivated land is still rain-fed grains, and the country continues to import millions of tons of wheat in drought years<sup>138</sup>. The UN rapporteur urged Morocco to "protect biodiversity and scarce water

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<sup>135</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>136</sup> Bernadette Montanari and Sylvia I Bergh, 'A Gendered Analysis of the Income Generating Activities under the Green Morocco Plan: Who Profits?' (2019) 47 *Human Ecology* 409.

<sup>137</sup> Amal Ennabih, 'Running out of Water – MIPA Institute' (*Mipa.institute* 16 September 2020)(n. 36)

<sup>138</sup> Green Morocco Plan Increases Morocco's Agricultural Output - Africa 2020 - Oxford Business Group' (*Oxford Business Group* 19 March 2020)(n. 39)

resources" in light of the large-scale monoculture plantations and intensified input use encouraged by the plan<sup>139</sup>. Indeed, the push for export-oriented farming raised questions about long-term sustainability. Agricultural chemical use and soil degradation, as well as the carbon footprint of years' worth of production, are areas that observers have flagged for closer scrutiny. Thus, while the Green Morocco Plan succeeded in starting a more dynamic agricultural economy, it also underscored classic development dilemmas, productivity versus sustainability, and growth versus equity.

To sum up, King Mohammed VI's Green Morocco Plan had a profound impact on Morocco's agricultural landscape. It modernized the sector, growing production and incomes, and showcasing a model of climate-aware agricultural policy in Africa<sup>140</sup>. Yet the experience also revealed some limitations, including the need for more inclusive support to small farmers and more thought-out natural resource management. These lessons are influencing Morocco's strategy moving forward with the "Generation Green" plan, which seeks to keep the gains of the Green Morocco Plan while addressing its social and environmental shortcomings. In the realm of climate leadership, the Green Morocco Plan stands as a case of a national solution that delivered on tangible economic results and progress on food security, even as it created new debate about how to achieve a truly sustainable and equitable agricultural development in the face of climate change<sup>141</sup>.

## **2nd Policy: Act 81-12**

Enacted when King Mohammed VI was on the throne, the 2016 Framework Water Law marked a sea change in Morocco's approach towards managing water scarcity. This Act built on the groundwork laid out by the 1995 Water Law, recasting water as a public good as well as a primary human right, while adding new principles related to sustainability, equity, and climate resilience<sup>142</sup>. The overhaul sought to go beyond Morocco's traditional supply driven model, mostly based on dams and irrigation, by calling for a holistic approach of conservation, diversification of supply, and decentralized approaches of management<sup>143</sup>. It

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<sup>139</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>140</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>141</sup> Celeste Hicks, 'Morocco's Progress on Food Security Acknowledged by UN but Work Remains' (*the Guardian* 27 October 2015) (n. 31)

<sup>142</sup> OECD, 'Toolkit for Water Policies and Governance CONVERGING towards the OECD COUNCIL RECOMMENDATION on WATER' (2021)

<[https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/03/toolkit-for-water-policies-and-governance\\_783de7b0/ed1a7936-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/03/toolkit-for-water-policies-and-governance_783de7b0/ed1a7936-en.pdf)>

<sup>143</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) <<https://openknowledge.worldbank.org/server/api/core/bitstreams/c5c11886-30bf-5350-8e5f-df9722b85fe0/content>>.

reinforced the role of river basin agencies, made participatory planning a necessity through the medium of aquifer agreements, and explicitly recognized other sources, such as desalinated sea water, and treated waste waters<sup>144</sup>. Through its institutionalization of the user pays and polluter pays principles, the act attempted to internalize the environmental externality built into over extraction, and pollution<sup>145</sup>. Overall, it created a comprehensive legal framework for ensuring lasting water security for a country where per capita availability had already slipped below 620 m<sup>3</sup> per year<sup>146</sup>.

Environmentally, the law's greatest success is putting groundwater protection at the heart of national policy. For years, aquifer depletion across areas like Souss-Massa, Saïss and Haouz endangered ecosystems and agricultural livelihoods. Act 81-12 mandated basin agencies to negotiate "participatory aquifer management contracts" regulating pumping, stimulating recharge, and facilitating public private partnerships<sup>147</sup>. In Souss-Massa, where the water table was dropping by nearly 2 meters a year, such a contract implementation, with desalination investment, allowed for moderation of withdrawals from deep, over exploited wells and provided a public private partnership model<sup>148</sup>. The law also equipped a professional water police at the basin agencies with the mandate for inspecting wells, punishing illicit withdrawals, a previously abandoned enforcement role<sup>149</sup>. While quantifiable recovery of the aquifers remains narrow, national depletion continues to outpace natural recharge by some 25–30 percent, the institutional shift towards the instrument of monitoring, regulating, is a step forward. For the first time, Morocco has at its disposal the legal, administrative tools to monitor, manage, and gradually decrease unsustainable abstraction<sup>150</sup>.

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<sup>144</sup> UNDP, 'National Adaptation Plan Process in Focus: Lessons from Morocco' (UNDP2018) <[https://www.undp.org/publications/national-adaptation-plan-process-focus-lessons-morocco?utm\\_source=chatgpt.com](https://www.undp.org/publications/national-adaptation-plan-process-focus-lessons-morocco?utm_source=chatgpt.com)>.

<sup>145</sup> World Bank, 'FOR OFFICIAL USE ONLY Report No: PAD 3800 INTERNATIONAL BANK for RECONSTRUCTION and DEVELOPMENT PROGRAM APPRAISAL DOCUMENT on A' (2021) <[https://documents1.worldbank.org/curated/en/245801608346893390/pdf/Morocco-Green-Generation-Program-for-Results-Project.pdf?>](https://documents1.worldbank.org/curated/en/245801608346893390/pdf/Morocco-Green-Generation-Program-for-Results-Project.pdf?)

<sup>146</sup> The World Bank, 'The World Bank Morocco Water Security and Resilience Program (P179192) Program Information Documents (PID)' (2023) <<https://documents1.worldbank.org/curated/en/099060723024517055/pdf/P179192045ef5f070b83c069916d70dcd3.pdf>>.

<sup>147</sup> Annabelle Houdret and Rebecca Heinz, 'Groundwater Governance through Institutional Bricolage? Participation in Morocco's Chtouka Aquifer Contract' [2022] Water International 1.

<sup>148</sup> Soufian El-Ghazel and others, 'Desalination in Morocco: Status and Prospects' (2021) 231 DESALINATION AND WATER TREATMENT 1.

<sup>149</sup> OECD, 'Toolkit for Water Policies and Governance CONVERGING towards the OECD COUNCIL RECOMMENDATION on WATER' (2021) (n.142)

<sup>150</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) (n.143)

The Act dramatically reshaped Morocco's approach to water supply, framing it within climate resilient adaptation goals. It enshrined the harnessing of non-traditional waters, enabling desalination and wastewater recycling as supplements to traditional dams. The Agadir desalination program, which began soon after the Act, produces 275,000 m<sup>3</sup> per day, serving urban centers, agriculture, and thus lessening stress on the Chtouka aquifer<sup>151</sup>, sustaining livelihoods across a 10,000 hectare irrigated farming area. At the national level, treated wastewater reuse attained a volume of 64 million m<sup>3</sup> per year by 2019, supported by the pollution control charges and environmental protection provided for under the act<sup>152</sup>. Although capital intensive, such efforts illustrate how Act 81-12 shifted Morocco's adaptation model from reactive drought response towards proactive diversification of water supplies<sup>153</sup>. In a second respect, the Act boosted river, wetlands, and flood protection conservation by expanding the public hydraulic domain's scope of coverage, and adding environmental flow objectives to watersheds plans. Still, the above efforts notwithstanding, the recurring problems introduced by seasonal drought and long term groundwater abstraction reflect a failure on the part of legislative change alone to temper climatic pressures. Realization of its full effects remains contingent on sustained implementation, investment, and effort.

Socioeconomically, Act 81-12 has strengthened equity and resilience, particularly at the rural level. Through codification of the right to water, it reinforced Morocco's efforts towards universal coverage. Between the early 1990s and the late 2010s, coverage of drinking water at the rural level improved from 14 percent to 97 percent, a success underpinned by the law's adoption of domestic supply priority for decisions on supply allocation<sup>154</sup>. When, during subsequent eras of successive drought, authorities have evoked the law when guaranteeing household coverage even when irrigation had to be halted, this illustrates its role

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<sup>151</sup> OECD, 'Toolkit for Water Policies and Governance CONVERGING towards the OECD COUNCIL RECOMMENDATION on WATER' (2021)

<[https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/03/toolkit-for-water-policies-and-governance\\_783de7b0/ed1a7936-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/03/toolkit-for-water-policies-and-governance_783de7b0/ed1a7936-en.pdf)>

<sup>152</sup> Henri Boyé, Blue Plan and Sophia Antipolis, 'Water, Energy, Desalination & Climate Change in the Mediterranean Ministry of Ecology, Energy, Sustainable Development and Town and Country Planning, France' (2008)

<[https://planbleu.org/sites/default/files/publications/regional\\_study\\_desalination\\_en.pdf?utm\\_source=chatgpt.com](https://planbleu.org/sites/default/files/publications/regional_study_desalination_en.pdf?utm_source=chatgpt.com)>

<sup>153</sup> RES4AFRICA Foundation, 'POWERING DESALINATION with RENEWABLE ENERGIES in Morocco' (2023)

<[https://res4africa.org/wp-content/uploads/2023/06/desalination\\_morocco\\_FINAL\\_DIGITAL.pdf](https://res4africa.org/wp-content/uploads/2023/06/desalination_morocco_FINAL_DIGITAL.pdf)>

<sup>154</sup> The World Bank, 'The World Bank Morocco Water Security and Resilience Program (P179192) Program Information Documents (PID)' (2023) (n,146)

of social protection<sup>155</sup>. The legal enshrinement of water as a public good also underpins new efforts on filling gaps left behind, particularly at the remote level, using inter basin transfers and supply infrastructure at the village level<sup>156</sup>. Act 81-12 also advanced participatory water governance as river basin councils now have representatives of irrigators, municipalities, and civil society, which heightens transparency and local accountability<sup>157</sup>. While inter ministerial and inter agency coordination remains imperfect, the framework already eased the fragmentation long criticized of Morocco's water policy regime<sup>158</sup>.

In agriculture, the biggest water consumer, the impact of the law goes hand in hand with that of the Green Morocco Plan. By synchronizing irrigation programs with water availability limitations, Act 81-12 reinforced the association between agricultural modernization and resource effectiveness<sup>159</sup>. Government support for drip irrigation backed by the water conservation mandate, converted more than 550,000 hectares to local irrigation by 2022, reducing farm consumption by up to 40–50 percent<sup>160</sup>. These efficiencies enhanced yield and revenue, enabling rural farmers to resiliently endure droughts. Nevertheless, the overall impact on overall water consumption has been ambivalent as efficiency improvements have frequently allowed farmers to increase areas cultivated or change crops to more water consuming ones, constraining net reduction<sup>161</sup>. This so-called "efficiency paradox"<sup>162</sup> highlights a structural contradiction between Morocco's export driven agricultural development and environmental limitations. Act 81-12 makes available instruments like pump quotas, aqueduct concessions, and pricing schemes to meet this, yet implementation remains politically sensitive<sup>163</sup>. Large

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<sup>155</sup> CIHEAM, 'Comparative Study between Moroccan Water Strategies and WFD Dialogues on Mediterranean Water Challenges: Rational Water Use, Water Price versus Value and Lessons Learned from the European Water Framework Directive Bari : CIHEAM Options Méditerranéennes : Série A. Séminaires Méditerranéens; N. 98 2011 Pages 181-188' (CIHEAM 2011) <<https://om.ciheam.org/ressources/om/pdf/a98/00801479.pdf?>>

<sup>156</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) (n.143)

<sup>157</sup> United Nations Development Programme, 'Documentation and Downloads' ([hdr.undp.org](http://hdr.undp.org)2021) <<https://hdr.undp.org/data-center/documentation-and-downloads>>.

<sup>158</sup> OECD, 'Toolkit for Water Policies and Governance CONVERGING towards the OECD COUNCIL RECOMMENDATION on WATER' (2021) (n.142)

<sup>159</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) (n.143)

<sup>160</sup> Annabelle Houdret and Rebecca Heinz, 'Groundwater Governance through Institutional Bricolage? Participation in Morocco's Chtouka Aquifer Contract' [2022] *Water International* 1.(n.147)

<sup>161</sup> OECD, 'Toolkit for Water Policies and Governance CONVERGING towards the OECD COUNCIL RECOMMENDATION on WATER' (2021) (n.142)

<sup>162</sup> World Bank, 'FOR OFFICIAL USE ONLY Report No: PAD 3800 INTERNATIONAL BANK for RECONSTRUCTION and DEVELOPMENT PROGRAM APPRAISAL DOCUMENT on A' (2021) <<https://documents1.worldbank.org/curated/en/245801608346893390/pdf/Morocco-Green-Generation-Program-for-Results-Project.pdf?>>

<sup>163</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) (n.143)

commercial farms have the advantage, whereas smallholders rely on shallow wells and lack capital for investing in technologies. Without firmer compliance and social protection, disparities in water accessibility might increase despite the egalitarian wish of the law.

At a larger socioeconomic level, the impact of the law is also seen in building climate resilience. It has legally enshrined the National Water Plan and harmonized water governance with Morocco's National Adaptation Plan. This alignment has enabled the nation to access climate finance for climate change adaptation projects such as the Green Climate Fund, thus connecting environmental sustainability with a generation of jobs<sup>164</sup>. Through the incorporation of water governance into provincial development planning, Act 81-12 promotes territorial cohesion, ensuring that relief for droughts and investments are shared between central urban regions and peripheral provinces<sup>165</sup>. Still, progress has not been uniform. While actions against illegal wells and pollution have enhanced impacts, they remain constrained by administrative capacity. Basin agencies experience staff deficits and overlapping mandates<sup>166</sup>, and many local users lack awareness of their role under the new legislation. In regions such as Haouz and Souss-Massa, disputes often arise between small farmers and controllers when holes are closed or pumping hours restrictions are introduced. These challenges demonstrate that Morocco's water transition is multifaceted. It requires confidence, incentives, and shared accountability.

Overall, Act 81-12 is a crucial institutional milestone for King Mohammed VI climate plan. Through Act 81-12, Morocco has strengthened its water infrastructure, integrated climate adaptation into the planning process, and authorized new conservation, enforcement, and citizen participation tools. Environmentally, it has begun to check exploitation and diversify water sources. Socioeconomically, it has secured drinking water supply and enhanced rural resilience capability. Nevertheless, its success remains imperfect. Water stress continues to intensify, per capita availability could dip below 500 m<sup>3</sup> by 2030<sup>167</sup>, and the gulf between legal intent on high ground and ground level impact remains wide. The law's success hinges, after all, on political will, inter-ministerial

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<sup>164</sup> UNDP, 'National Adaptation Plan Process in Focus: Lessons from Morocco' (UNDP2018) (n.144)

<sup>165</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) (n.143)

<sup>166</sup> OECD, 'Toolkit for Water Policies and Governance CONVERGING towards the OECD COUNCIL RECOMMENDATION on WATER' (2021) (n. 151)

<sup>167</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) (n.143)

coordination, and behavioral changes on the part of water users<sup>168</sup>. Its true proof, however, is if Morocco is successful at translating this sophisticated legal instrument on paper into actual replenishment of the aquifers, cleaner rivers, and equitable access for all. As part of Mohammed VI overall environmental program, Act 81-12 is a victory of governance and a proof of performance. It is a much needed step towards a sustainable water security for a climate constrained world.

### **3rd Policy: National Adaptation Plan (NAP1)**

The National Adaptation Plan (NAP1) led by King Mohammed VI has made a significant difference for Morocco in terms of climate resilience and national development. Particular in adaptation methods and institutional changes. The National Committee for Climate Change and a climate-focused directorate in the Environment Ministry were two important structures that were set up. The 4C Maroc competence centre also helped build capacity and improve cooperation between African countries<sup>169</sup>. From 2016 to 2024, adaptation funding went from 1.7% of the budget to between 6.5% and 9% of the budget each year<sup>170</sup>. Morocco promised more than \$35 billion (2020–2030) to help with adapting to changes in water, farming, and forestry<sup>171</sup>.

These investments have led to real projects. The goal of the “Forests of Morocco 2020–2030” program is to plant trees on 600,000 hectares, create jobs in rural areas, and restore ecosystems<sup>172</sup>. Morocco also set up a dual public-private disaster insurance and solidarity fund that helped over 180 projects to reduce risk and supported people affected by the 2023 earthquake<sup>173</sup>. “Génération Green” and other climate-smart programs encourage crops that can survive drought and better irrigation<sup>174</sup>. All of these actions made Morocco a regional climate leader, especially after it hosted COP22 and pushed for adaptation to be a top development goal<sup>175</sup>.

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<sup>168</sup> World Bank, 'FOR OFFICIAL USE ONLY Report No: PAD 3800 INTERNATIONAL BANK for RECONSTRUCTION and DEVELOPMENT PROGRAM APPRAISAL DOCUMENT on A' (2021)(n.162)

<sup>169</sup> 4C Maroc, Centre de Compétences Changement Climatique du Maroc <https://www.4c.ma>

<sup>170</sup> Ministry of Economy and Finance, Rapport Économique et Financier 2024 (Government of Morocco 2024) <https://www.finances.gov.ma/Publication/depf/2024/rapport-economique-et-financier-2024.pdf>

<sup>171</sup> Kingdom of Morocco, Updated Nationally Determined Contribution (NDC) (UNFCCC 2021) <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Morocco%20First/NDC-Morocco-2021-EN.pdf>

<sup>172</sup> Ministry of Agriculture, Forêts du Maroc 2020–2030 (Government of Morocco 2020) <https://www.agriculture.gov.ma/sites/default/files/For%C3%AAts%20du%20Maroc%202020-2030.pdf>

<sup>173</sup> Ministry of the Interior, Fonds de Lutte Contre les Effets des Catastrophes Naturelles (2023) <https://www.fnec.gov.ma>

<sup>174</sup> Ministry of Agriculture, Génération Green 2020–2030 (Government of Morocco 2020) <https://www.agriculture.gov.ma/fr/pages/strategie-generation-green-2020-2030>

<sup>175</sup> UNFCCC, COP22 Marrakech Outcomes (2016)

<https://unfccc.int/process-and-meetings/conferences/past-conferences/marrakech-climate-change-conference-november-2016/cop-22>

Whilst the policy has made several breakthroughs, Morocco is still vulnerable to climate stress, especially in the form of drought and water scarcity. 12 major droughts can be followed back to 1980, and the one in 2025 is the longest one yet<sup>176</sup>. Critics mention that while adaptation efforts work across different sectors, it is missing effectiveness at a local level. Climate risk data often doesn't help with city planning, which makes it harder to respond to problems<sup>177</sup>. Also, centralised governance has made it easier to keep an eye on things, but it has pushed local voices and civil society participation to the side, making it less effective for the most vulnerable groups<sup>178</sup>.

In the water sector, a supply-oriented approach is the most common. Dams, reservoirs, and desalination plants are all very popular<sup>179</sup>. Some people say this model won't work in the long run and call for a shift to demand-side solutions like choosing the right crops and fairly distributing water<sup>180</sup>. Morocco's agricultural exports, which often use a lot of water, are still putting a strain on aquifers, making rural areas even more vulnerable<sup>181</sup>. Adaptation technologies, like advanced irrigation, are still mostly available to large farms and businesses, while small farmers have a hard time getting them<sup>182</sup>. This could make inequality in rural areas worse.

NAP1 has successfully made climate policy a top priority for national development, but the results on reducing vulnerability are still uneven. Water security, farming productivity, and the lives of people in rural areas are still in a lot of trouble. But King Mohammed VI's leadership has made adaptation a part of Morocco's long-term vision. His government has spent a lot of money on climate change, more than two-thirds of it goes towards adaptation, and made caring for the environment a key part of national security and prosperity<sup>183</sup>.

To conclude, while NAP1 has made many successful changes in Morocco and improved the reputation of the country around the world, there are still gaps in how things are done. How well NAP1 works as a long-term model for climate

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<sup>176</sup> World Bank, Climate Risk Country Profile: Morocco (2022)

[https://climateknowledgeportal.worldbank.org/sites/default/files/2021-06/15858-WB\\_Morocco%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-06/15858-WB_Morocco%20Country%20Profile-WEB.pdf)

<sup>177</sup> UN-Habitat, Urban Climate Resilience in the MENA Region (2023)

<https://unhabitat.org/urban-climate-resilience-in-the-arab-region>

<sup>178</sup> Transparency Maroc, La participation citoyenne dans la gouvernance environnementale (2022)

<https://transparencymaroc.ma>

<sup>179</sup> Ministry of Equipment and Water, Plan National de l'Eau 2020-2050 (2020)

<https://www.water.gov.ma/fr/actualites/plan-national-de-leau-2020-2050>

<sup>180</sup> FAO, Towards Sustainable Water Use in North African Agriculture (2023)

<https://www.fao.org/documents/card/en/c/cc6170en>

<sup>181</sup> OCP Policy Center (PCNS), Water Use in Moroccan Agriculture (2023)

<https://www.policycenter.ma/publications/moroccos-agricultural-water-policy-challenges-and-opportunities>

<sup>182</sup> IFAD, Rural Development and Inequality in Morocco (2024)

<https://www.ifad.org/en/web/knowledge/publication/asset/42025161>

<sup>183</sup> Ministry of Energy Transition and Sustainable Development, Cadre d'Investissement Climat au Maroc (2024) <https://www.environnement.gov.ma/fr/media/5845>

resilience or a partial success will depend on how well these issues are addressed through decentralised planning, policies that promote equity, and participation that includes everyone. Not only does King Mohammed VI's legacy depend on his vision, but it also depends on how well adaptation practice continues to improve to protect Morocco's most vulnerable people and ecosystems<sup>184</sup>.

## **Conclusion**

The climate leadership of King Mohammed VI in Morocco has been characterised by a multi pronged policy that is ambitious and that closely connects environmental action with the development path of the country. Throughout the agricultural sector, water and climate overall resiliency, his reign launched ambitious policies that placed Morocco as a climate leader in the region. The Green Morocco Plan, the Act 81-12 on coastal zones as well as the National Adaptation Plan have been dealing with the critical climate vulnerabilities with the goal to stimulate economic and social progress. Combined, these measures make up a unified vision of climate governance under Mohammed VI, a vision that has already recorded some concrete achievements yet also unveiled levels of tension and implementation issues, which Morocco still needs to overcome.

Climate policy became the driver of national development under King Mohammed VI. The Green Morocco Program turned the agricultural sector into a growth and poverty alleviating engine. It improved the agricultural GDP growth and rural incomes by modernizing the farming practices and investing heavily in irrigation and high value crops<sup>185</sup>. There was enhanced food security, malnutrition rates dropped and Morocco achieved major hunger reduction goals before time<sup>186</sup>. Simultaneously, the climate program in Morocco was extended into water management and coastal management. Act 81-12 developed one of the most comprehensive structures of coastal climate adaptation in the region. It also proposed the concept of integrated coastal governance, stringent ecosystem protection<sup>187</sup>, and resilience planning in the long term to protect communities and

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<sup>184</sup> KEM Cleaver, The Agricultural Development Experience of Algeria, Morocco, and Tunisia: A Comparison of Strategies for Growth (World Bank 2025)

<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/195751468773979263>

<sup>185</sup> FAO, 'Évaluation Du Programme Pays de La FAO Au Maroc 2017-2020 | UNEG' (Unevaluation.org2021)

[https://unevaluation.org/member\\_publications/evaluation-du-programme-pays-de-la-fao-au-maroc-2017-2020?](https://unevaluation.org/member_publications/evaluation-du-programme-pays-de-la-fao-au-maroc-2017-2020?)

<sup>186</sup> World Bank, 'FOR OFFICIAL USE ONLY Report No: PAD 3800 INTERNATIONAL BANK for RECONSTRUCTION and DEVELOPMENT PROGRAM APPRAISAL DOCUMENT on A' (2021)(n.162)

<sup>187</sup> Au, 'TARIFS D'ABONNEMENT a L'ETRANGER' (2015)

<https://archive.gazettes.africa/archive/ma/2015/ma-bulletin-officiel-dated-2015-10-15-no-6404.pdf>.

vital sectors of the economy of Morocco along the coast. On the national policy level, NAP1 established a standard towards climate adaptation planning in the global south. Morocco has incorporated climate adaptation into their development budgets, established special climate institutions and implemented programs<sup>188</sup>, which all helped in enhancing the country to manage droughts, floods and other climate pressures. These initiatives have not just helped decrease some of the weaknesses on the domestic front, but have also increased the global image of Morocco as a dedicated climate change leader, such as hosting COP22 and leading on adaptation throughout the global south.

The climate policies of Morocco under Mohammed VI have had to attain the balance between the gains of development and the social equity and environmental sustainability, and the trade offs can still be seen. Aggressive rural development as a goal of the Green Morocco Plan, such as the interests of agricultural prosperity, revealed a struggle between productivity and inclusivity. The investments and the gains of the plan were biased towards the large agribusiness projects at the expense of the small farms and women as the output increased tremendously<sup>189</sup>. Equally, the urge towards intensification in agriculture brought to the fore the classical growth versus sustainability issue<sup>190</sup>. With the introduction of modern irrigation and export agriculture, the increases in yields and exports were accompanied by the threat of the disappearance of water resources and biodiversity. In the case of Act 81-12, this entire purpose of balancing between the coastal development and conservation is a contradiction. The coast lines of Morocco is the economic focus, a place critical to tourism, agriculture and urban development, and so the implementation of no building zones and pollution control may run counter with the immediate development concerns<sup>191</sup>. The policy is trying to compromise this by involving the stakeholders in the decision making process but the real challenge is the ability to resist the temptation of unsustainable growth with the aim of making economic profits. In the case of NAP1, strong and centralized national institutions have facilitated easier planning and attract funding but have marginalized local voices in some cases<sup>192</sup>. This indicates a larger conflict between overarching strategy and grassroots inclusion. A national plan may be a visionary direction, but

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<sup>188</sup> UNDP, 'National Adaptation Plan Process in Focus: Lessons from Morocco' (UNDP2018) (n.144)

<sup>189</sup> Andrea Mathez and Alex Loftus, 'Endless Modernisation: Power and Knowledge in the Green Morocco Plan' (2022) 6 Environment and Planning E: Nature and Space.

<sup>190</sup> Andrea Mathez and Alex Loftus, 'Endless Modernisation: Power and Knowledge in the Green Morocco Plan' (2022) 6 Environment and Planning E: Nature and Space. (n.189)

<sup>191</sup> World Bank, 'MOROCCO CLIMATE RISK COUNTRY PROFILE' (2021)

<[https://www.pseau.org/outils/ouvrages/world\\_bank\\_climate\\_risk\\_country\\_profile\\_morocco\\_2021.pdf?](https://www.pseau.org/outils/ouvrages/world_bank_climate_risk_country_profile_morocco_2021.pdf?)>

<sup>192</sup> UNDP, 'National Adaptation Plan Process in Focus: Lessons from Morocco' (UNDP2018) (n.144)

sustainability will be ensured over time by involving and getting local communities to buy into it to feel the day to day consequences of climate change.

It has proved to be as difficult to implement these flagship policies just as it was bold in design. One of the broad issues is to make sure that policy intentions result in fair outcomes on the ground. In the case of the Green Morocco Plan, this would imply the further expansion of assistance to the marginal smallholders and underfavored areas as the rural development will be distributed in a broad way. It also implies the optimization of agricultural policies to safeguard the natural resources, such as promoting water conserving techniques that actually lower water consumption, and attracting the use of crops that are consistent with the water resources in Morocco. The success of Act 81-12 will depend on strict enforcement and coordination. Protection frameworks of the coastal zone and multi leveled governance are established, and it is necessary to continue the movement by regular control and coordination of ministries, local government, businesses, and civil society<sup>193</sup>. The issues of resistance against negative development along the coastline, the restoration of the damaged ecosystems, as well as funding climate defenses will require persistent political determination even after the initial introduction of the law. Similarly, NAP1 has been able to map an extensive route, yet there is still work to do to bridge the policy and impact gap. Projects on climate resilience are already being implemented but at the same time, Morocco has to endure harsh droughts and water shortages that put the existing efforts to the test. Enhancing adaptive capacity at the local level such as, supplying municipalities with usable climate risk information and enabling regional actors is a continuing requirement<sup>194</sup>. Also, not all adaptation solutions, such as high tech irrigation or drought resistant crops, should be left to large farmers to prevent the expansion of social inequalities. The implementation in all three policies requires fine tuning and course corrections, be it in new Green Morocco Plan inspired agricultural programs to build on the lessons of Green Morocco Plan or through reorienting water management towards demand side strategies as climate pressures increase.

The fact that these policies are convergent under the one leadership is indicative of a holistic vision. King Mohammed VI has always presented the climate action not as such but as part of the Moroccan security system, economic prosperity,

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<sup>193</sup> A Closas and KG Villholth, 'Aquifer Contracts: A Means to Solving Groundwater Over-Exploitation in Morocco?.'

<<https://gripp.iwmi.org/gripp/publications/case-profile-series/issue-01.pdf>>

<sup>194</sup> The World Bank, 'The World Bank Morocco Water Security and Resilience Program (P179192) Program Information Documents (PID)' (2023) (n,146)

and global position. This top governmental commitment meant that projects such as the Green Morocco plan, Act 81-12 and NAP1 received political resources and priority. It also enabled Morocco to position itself as an active advocate of climate issues around the world, balancing issues of developing countries and international climate issues<sup>195</sup>. His style of leadership combining centralization with a prospective approach implied that the climate policies could be implemented on large scale and swiftly, relying on state resources and overseas collaborations. The advantage of this strategy can be seen on the rate and volume of climate programs in Morocco. Nevertheless, the difficulties that still remain in place highlight the fact that successful climate governance is an ongoing process. The policies were being provided by strong leadership, and now they need adaptive governance and involvement of all stakeholders to fully achieve this<sup>196</sup>.

To sum it up, the reign of King Mohammed VI has placed Morocco on the course of climate conscious development with great plans and groundbreaking reforms. The results are evident: a modernized agricultural foundation, being more responsive to climate facts, legal and institutional orders that safeguard the key resources, and a national agenda, where adaptation and sustainability are viewed as the cornerstones of development<sup>197</sup>. Meanwhile, the tensions and obstacles to implementation that have been experienced are a reminder that policy objectives have to be accompanied by long term and fair practice. The practice of climate leadership within the context of Morocco under Mohammed VI exemplifies the idea that climate leadership cannot be characterized solely by formulating visionary policies, but rather by the persistence of making sure that the policy does not result in subtle trade offs. His climate legacy will only be judged by the extent of how Morocco will balance growth and inclusion, ambition and resilience as it develops the foundation that began during his reign. King Mohammed VI has certainly created a new path in the way Morocco reacts to the difficulties of climatic changes but now it remains to solidify the achievements and make sure that the prospect of a safe and sustainable future is achieved by everyone in Morocco.

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<sup>195</sup> UNFCCC, 'MARRAKECH ACTION PROCLAMATION for OUR CLIMATE and SUSTAINABLE DEVELOPMENT We' (2016)  
<[https://unfccc.int/files/meetings/marrakech\\_nov\\_2016/application/pdf/marrakech\\_action\\_proclamation.pdf](https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/marrakech_action_proclamation.pdf)>.

<sup>196</sup> UNDP, 'National Adaptation Plan Process in Focus: Lessons from Morocco' (UNDP2018) (n.144)

<sup>197</sup> World Bank and Group Morocco, 'Country Climate and Development Report : Morocco' (2022) (n.143)

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