

Climate, Land, and Rights: The quest for social and environmental justice in the Arab region

# Green Grabbing in the Arab Region: Drivers and Implications for Sustainability

Ghinwa Harik  
Rami Zurayk

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### **Ghinwa Harik**

Assistant Professor of Environmental Engineering at the Lebanese University and environmental consultant at AUB.

### **Rami Zurayk**

Professor of Landscape Design and Ecosystem Management, AUB.  
Project Advisor, CLR

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**Supported by:**



**In partnership with:**



#### **Project Supervisors and Co-Directors**

Mona Khechen, TPI senior fellow  
Sami Atallah, TPI director

#### **Project Coordinators**

Rana Habr, TPI research associate  
Sami Zoughaib, TPI research manager

#### **Lead Legal Researcher**

Nizar Sagieh, The Legal Agenda  
Executive Director

#### **Project Communications**

Rawand Issa, TPI digital  
communications lead

#### **Project Advisors**

Mona Harb, AUB professor  
Rami Zurayk, AUB professor

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# Abstract

Green grabbing—the privatization or appropriation of land and natural resources under the guise of environmental action—poses significant environmental and social challenges, particularly in the Arab region due to its unique socio-economic and environmental vulnerabilities. This paper reviews existing literature to document and analyze cases of land appropriation, explore their socio-economic and environmental impacts on local communities and ecosystems, and identify the root causes and drivers behind these practices.

Employing a rigorous systematic review methodology following the PRISMA framework, coupled with a Root Cause Analysis (RCA) and the development of a country-specific typology, the study synthesizes evidence from 115 documents published between 2000 and 2024. The RCA identifies key underlying factors, categorizing them into economic motivations, social dynamics (including power imbalances and unequal land tenure), political factors (such as instability and weak governance), and environmental pressures (such as climate change and water scarcity). The typology further categorizes Arab countries based on natural resource availability, the scale of land grabs, and the distinction between “green” and “non-green” grabbing, revealing diverse regional dynamics.

The findings highlight significant negative consequences for local communities, including loss of land rights, increased socio-economic inequalities, and adverse effects on local ecosystems. While some green initiatives may contribute to sustainable development, many exacerbate existing disparities. The paper identifies critical gaps in current knowledge, particularly regarding resistance strategies, the effectiveness of interventions, and the nuanced impacts of smaller-scale or local land acquisitions. Ultimately, this research aims to inform policymakers and stakeholders, promoting more equitable and sustainable approaches to land and resource management. It emphasizes the urgent need for strengthened governance mechanisms, adherence to international guidelines, transparent processes, and regional cooperation to mitigate the adverse impacts of green grabbing and safeguard the rights and well-being of vulnerable populations in the Arab region.

# 1. Introduction

Green grabbing is the privatization or appropriation of land and natural resources under the guise of environmental action, as well as the deregulation, exploitation, and appropriation of protected nature for private profit (Inan and Albulut, 2022; Wieckardt et al., 2022; Siamanta, 2019). This form of land appropriation poses significant environmental and social challenges. This issue is particularly pressing in the Arab region, given its unique socio-economic, political, and environmental vulnerabilities, including land scarcity, water shortages, and rapid population growth. As countries in the region grapple with these issues, green grabbing becomes increasingly pronounced, often exacerbating socio-economic inequalities and undermining traditional land rights. Recognizing the significance of this problem is crucial for devising effective policy responses and safeguarding the rights and well-being of vulnerable social groups. This requires a comprehensive understanding of the underlying mechanisms that enable or impede green grabbing in the region, along with the emerging implications on sustainable development. While various forms of opposition to land grabbing exist, ranging from grassroots activism to legal challenges, there is limited systematic research examining the conditions under which these strategies succeed or falter. Such research could offer practical guidance for grassroots movements, civil society organizations, and policymakers aiming to mitigate green grabbing and uphold land rights across the Arab region.

**This paper examines the drivers, mechanisms, and implications of green grabbing in Arab countries. It aims to provide a comprehensive understanding of green grabbing and its implications for the Sustainable Development Goals (SDGs) in the Arab region.**

This paper examines the drivers, mechanisms, and implications of green grabbing in Arab countries. It aims to provide a comprehensive understanding of green grabbing and its implications for the Sustainable Development Goals (SDGs) in the Arab region. Through a systematic review of existing literature, the study documents and analyzes cases of land appropriation, explores the socio-economic and environmental impacts on local communities and ecosystems, and identifies the root causes and drivers behind these practices. By developing a typology of green grabbing specific to Arab countries and linking these findings to relevant SDGs, the paper seeks to highlight gaps in current knowledge and inform policymakers and stakeholders of the complex dynamics involved, ultimately promoting more equitable and sustainable land and resource management approaches. Applying a Root Cause Analysis (RCA) framework seeks to unravel the factors driving land appropriation under the guise of environmental protection and advocate for policy changes to protect the rights and livelihoods of affected communities. Developing country-by-country typologies for green grabbing in the Arab region helps identify vulnerable countries, reveal patterns and trends, target interventions, and enable comparative analysis to understand variations in drivers and impacts.

## 2. Methods

### Systematic review of existing literature, data, and evidence on green grabbing assessments in Arab countries

This study reviews literature, data, and empirical evidence on green grabbing in Arab countries, drawing from academic journals, research papers, and reports from international organizations and government agencies. Using a rigorous methodology to ensure transparency and replicability, a structured search strategy was developed with key databases, search engines, and Boolean operators. Inclusion and exclusion criteria were based on publication date, language, study design, and relevance. The PRISMA framework (Moher et al., 2009) was followed to minimize selection bias and ensure a structured approach to study identification and analysis (Moher et al., 2009; Koutsos et al., 2019). The search process was documented, including databases, search terms, retrieved records, and screening dates. Titles and abstracts were initially reviewed, followed by full-text evaluations. A standardized data extraction form collected study characteristics, methodology, and findings, while study quality was assessed based on design, sample size, and risk of bias. Synthesized results identified common themes, patterns, and gaps, using qualitative or quantitative methods as appropriate, providing key insights into the socio-economic, political, and environmental dimensions of green grabbing.

The search was conducted across four major multidisciplinary databases: Google Scholar, Agricola, Wiley Online Library, and Science Direct, following methodologies from recent studies on green grabbing (Navarro et al., 2020). A combination of search terms was used, including "land grab," "land rush," "land-based investment," "land acquisition," "environmental conservation," "ecosystem services," "protected areas," and "land use change." Boolean operators such as "and" and "or" were employed. Given the contested nature of the term "land grabbing," alternative terms such as "large-scale land acquisitions" (LSLA), "land rush," "land deals," and "green investment" were also included to ensure a comprehensive review. This variation in terminology reflects differing perspectives on land transactions, their motivations, and consequences. A specific set of inclusion and exclusion criteria were developed. Inclusion criteria required studies that included socio-economic, political, and environmental drivers of green grabbing along with its socio-economic and environmental consequences. We included also studies that presented responses from local communities in terms of economic, sociocultural and environmental impacts, whether the study provided empirical data or descriptive portrayals to present changes before and after land deals and on all scales. We targeted documents discussing the underlying drivers and causes of green grabbing in the Arab region, such as land scarcity, water scarcity, population growth, and conflicting land use policies. We excluded studies that were only targeting investors and global reaction without a focus on the local scale to avoid generalized or investor-driven viewpoints that may not fully reflect local realities. We also excluded studies that only focused on political structures and processes, and power relations in land deals to focus on more actionable insights relevant to local stakeholders. A restriction was applied to the publication date, so to exclude documents older than 17 years. We selected case studies published after 2007 when the concept of topical "land grabbing" first appeared.

## Root Cause Analysis (RCA)

This study employs The Land Coalition's RCA Framework, which systematically identifies and analyzes the underlying drivers of land use and ownership disputes, shedding light on their broader socio-political implications (Quan, 2017; Habitat/Global Land Tool Network, 2015; Olson et al., 2004; Campbell, 2003). The process begins with defining objectives and gathering background information, relying on the previous systematic review. Contributing factors were identified by detecting gaps, ambiguities, or enforcement issues that fuel land conflicts. Economic motivations, including foreign investments, tourism infrastructure development, and resource exploitation, were analyzed alongside social, cultural, political, and institutional influences such as land tenure traditions, governance structures, and corruption.

**This study employs The Land Coalition's RCA Framework, which systematically identifies and analyzes the underlying drivers of land use and ownership disputes, shedding light on their broader socio-political implications.**

To organize these factors, Fishbone diagrams (Ishikawa) were used to visually map them into key themes: policy, economic, social, and political. The Five Whys technique was then applied to trace each issue back to its root cause by repeatedly asking "why." Once root causes are identified, the RCA was used to assess proximate factors (immediate contributors like government land acquisitions and forced displacements) and triggers (specific events that escalate conflicts) (Quan, 2017; Habitat/Global Land Tool Network, 2015). A crucial aspect of the RCA Framework is contextual analysis, which examines socio-political and cultural dynamics, power structures, governance systems, and the roles of local and external actors in exacerbating or mitigating conflicts. The final step integrates RCA insights into peacebuilding and conflict resolution strategies, ensuring interventions are context-sensitive, targeted, and address root causes rather than symptoms (Quan, 2017; Habitat/Global Land Tool Network, 2015). The framework's flexibility allows governments, NGOs, and international organizations to adapt it to specific contexts, making it particularly effective in conflict-prone areas where land issues intersect with identity, social justice, and survival. By systematically addressing land conflicts, it serves as a critical tool for long-term peacebuilding efforts.

## Typology

The researchers employed a typology of green grabbing in the Arab region, categorizing and explaining patterns of land acquisition based on economic conditions, governance structures, environmental policies, and the roles of domestic and foreign actors (Nolte et al., 2016). To develop this typology, key variables influencing green grabbing were defined relying on the results of the RCA. This included economic factors such as GDP, agricultural dependence, industrialization level, and foreign direct investment (FDI) (Gatti et al., 2024). Governance indicators, including political stability, corruption levels, legal framework effectiveness, and land tenure security, were also examined (Gatti et al., 2024; UNEP, 2010). Researchers assessed environmental policies based on regulatory enforcement, renewable energy initiatives, and conservation efforts (FAO, 2020). The roles of domestic and foreign actors, including private

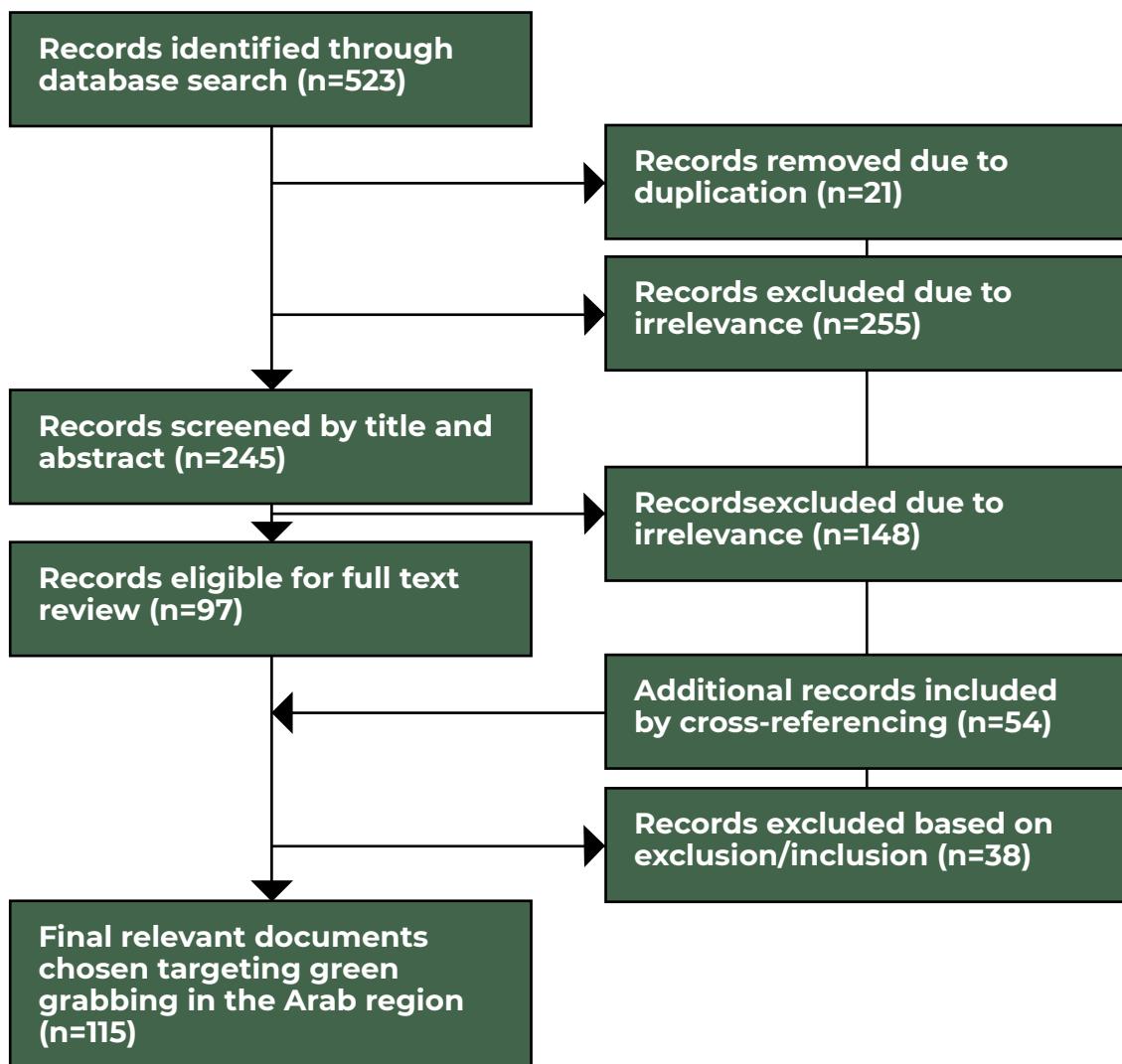
companies, state-owned enterprises, and NGOs, were analyzed (Verhoeven, 2011). Additionally, the socio-economic impact on local communities was evaluated through displacement rates, livelihood changes, and social inequality (De Schutter, 2011; Hanieh, 2013). Data collection relied on the systematic review findings focusing on reports from international organizations such as the World Bank, UN, and FAO (Gatti et al., 2024; UNEP, 2010; FAO, 2020b), as well as peer-reviewed academic studies, government documents, and NGO case studies (Cotula, 2013; Nolte et al., 2016). This data was analyzed to identify trends and commonalities, grouping countries into categories such as resource-rich but governance-poor nations, politically stable states with strong environmental policies, agriculture-dependent economies, and emerging economies with growing energy needs (Gatti et al., 2024; UNEP, 2010).

# 3. Results

## Systematic review of existing literature, data, and evidence on green grabbing assessments in Arab countries

The systematic review process ensured a rigorous selection of relevant studies through a multistage screening approach. The initial search identified 523 documents published between 1996 and 2024. After removing 21 duplicate entries, the screening proceeded with a title and abstract review, leading to the exclusion of 255 irrelevant studies. This refinement resulted in 97 documents deemed eligible for full-text review. To enhance comprehensiveness, a manual search of reference lists identified 54 additional relevant studies. A detailed content analysis, applying predefined inclusion and exclusion criteria, led to the removal of 38 documents that did not align with the research question. Ultimately, 115 studies published between 2000 and 2024 were included in the final analysis (Figure 1).

Figure 1: Flowchart of the selection of records based on PRISMA guidelines



The reference timeline shows a right-skewed distribution, with a mean publication year of 2020 and a median of 2022. Although the data spans 23 years, most references cluster within the last decade (2010–2024), with a 95th percentile year of 2024. A standard deviation of 5.39 years reflects some variability, but recent sources dominate while a few older references extend the range. Interest in green grabbing in the Arab region grew notably in the mid-2000s, paralleling rising global concern over land grabbing, environmental justice, and sustainable development (UNEP, 2010; FAO, 2020b; Navarro et al., 2020; Gatti et al., 2024). This research expanded in the late 2000s and early 2010s, especially around biofuel-related land acquisitions (UNEP, 2010; FAO, 2020b), a trend that continues with new case studies highlighting evolving regional impacts.

Initially, studies on land grabbing in Arab countries focused on large-scale acquisitions for food production, echoing global food security concerns (Zoomers, 2010). Early work examined foreign agricultural investments for export, raising issues of sovereignty, displacement, and competition over resources (Isaac & Hilal, 2011; O'Callaghan, 2009). Since 2014, the scope has broadened to include environmental sustainability, social justice, governance, and the socioeconomic impacts of land deals (Fouad et al., 2022; Cobbett & Mason, 2021; Al-Shaar & Bonin, 2021). Recent studies examine land governance, SDGs, and the influence of international actors and neoliberal policies (African Union Commission/OECD, 2023; Eklund et al., 2021), reflecting a shift toward understanding land grabbing as a complex, multi-dimensional issue beyond economic motives.

Research distribution is uneven across Arab countries. Egypt and Algeria receive moderate attention due to their environmental and geopolitical significance, while countries like Djibouti and Bahrain are understudied, likely due to limited data or funding (Table 1). Key gaps include the socio-economic effects of foreign land investments, environmental outcomes of urban expansion, long-term impacts of military bases, and water resource management in reclamation projects, indicating a thematic bias. Country-specific trends also vary (Table 1): Algeria, Jordan, and Lebanon emphasize conservation and reforestation, while Bahrain, Kuwait, and the UAE focus on urban and industrial growth. Conflict-driven land grabbing dominates in Iraq, Libya, Syria, and Yemen. In Saudi Arabia, Oman, and Qatar, economic diversification strategies like Vision 2030 drive land acquisitions. Water scarcity remains critical in Jordan, Egypt, and Saudi Arabia, influencing land-use policy. Urbanization is a major driver in Bahrain, Kuwait, Qatar, and the UAE, with notable socio-economic and environmental consequences. These patterns underscore the region's diverse land grabbing dynamics and their varied implications.

Table 1: Trends and inadequacies across countries

Country	Number of studies	Lacking/ Underrepresented subtopics	Notable trends
Algeria	6	Socio-economic impacts of foreign land investments in agriculture and energy	Focus on national parks and conservation, with less emphasis on foreign land deals
Bahrain	4	Environmental outcomes of urban expansion	Strong focus on urban and industrial development impacts

Country	Number of studies	Lacking/Underrepresented subtopics	Notable trends
Djibouti	3	Long-term socio-economic impacts of military base development	Geopolitical interests dominate land grabbing discussions
Egypt	5	Water resource management in land reclamation projects	Emphasis on agricultural land reclamation and foreign investments
Iraq	4	Environmental outcomes of oil sector investments	Post-conflict economic recovery drives land grabbing discussions
Jordan	6	Renewable energy projects' socio-economic impacts	Strong focus on water scarcity and conservation efforts
Kuwait	3	Environmental impacts of the urban heat island effect	Urbanization and industrial growth dominate land grabbing discussions
Lebanon	6	Long-term impacts of reforestation initiatives	Strong focus on biodiversity conservation and forest management
Libya	4	Post-revolution land grabbing and its socio-economic impacts	Political instability drives land grabbing discussions
Mauritania	2	Environmental impacts of land formalization	Urbanization and land tenure issues are the main focus
Morocco	8	Socio-economic impacts of renewable energy projects	Strong focus on reforestation, national parks, and large-scale agricultural ventures
Oman	3	Socio-economic impacts of large-scale development projects	Economic diversification and infrastructure investments dominate discussions.
Palestine	12	Environmental outcomes of settlement expansion	Israeli settlement policies dominate land grabbing discussions
Qatar	3	Socio-economic impacts of urban expansion	Urban development and infrastructure dominate land grabbing discussions

Country	Number of studies	Lacking/Underrepresented subtopics	Notable trends
Saudi Arabia	4	Water resource management in agricultural land investments	Vision 2030 economic diversification drives land grabbing discussions
Sudan	4	Long-term ecological impacts of large-scale land acquisitions	Large-scale agricultural investments dominate land grabbing discussions
Syria	3	Environmental outcomes of conflict-driven land grabbing	Ongoing conflict and humanitarian crises dominate land grabbing discussions
Tunisia	6	Socio-economic impacts of foreign investments in tourism	Strong focus on reforestation, national parks, and agricultural land grabs
UAE	4	Environmental impacts of mega-projects	Rapid urban expansion and economic growth dominate land grabbing discussions
Yemen	4	Socio-economic impacts of conflict-driven land grabbing	Ongoing conflict and humanitarian crises dominate land grabbing discussions

Across Arab countries, recurring themes include socio-economic upheavals due to displacement, environmental concerns over biodiversity loss and water resources, and governance challenges related to land tenure and regulation (Appendix A; Table 1). Additional patterns involve growing resistance to land acquisitions, the influence of foreign and intra-regional investments, and uneven regulatory oversight (Appendix A; Table 1).

Changes in land use disrupt traditional livelihoods, especially through displacement linked to biofuel and renewable energy projects. While promoting sustainability, such initiatives often transform agricultural lands and exacerbate food insecurity and inequality (Fairhead et al., 2012; Zoomers, 2010). Conservation projects similarly restrict access to ancestral lands, creating trade-offs between environmental goals and community rights (Borras & Franco, 2012). Country examples illustrate these impacts: in Algeria, conservation in Tassili n'Ajjer and Taza spurred tourism but displaced locals; Bahrain's urbanization reshaped coastal fishing areas; and Djibouti's port and military expansions displaced vulnerable groups despite infrastructure gains (Fautras & Iocco, 2019; Hamouchen, 2019; Odusola, 2014). Egypt's land reclamation near the Nile has marginalized Bedouins and farmers, while Iraq's foreign investments in Kurdistan intensified land competition. Jordan and Lebanon's conservation efforts restrict land use, reducing resilience, and Kuwait's urban expansion has raised housing prices. Similar displacement patterns are observed in Libya, Mauritania, and beyond,

worsening inequalities and threatening traditional livelihoods (Henderson, 2021; Nour, 2019; Cochrane & Amery, 2017; El Moghazy, 2016; Dixon, 2014).

While conservation efforts aim to protect ecosystems, they also face challenges like invasive species, ecological imbalances, and human-wildlife conflict. Protected areas such as Ajloun (Jordan), Ichkeul (Tunisia), El Kala (Algeria), and reforestation in Morocco exemplify these complexities. Urbanization and tourism degrade biodiversity in Bahrain and Algeria, while Djibouti's developments strain coastal ecosystems (Fautras & Iocco, 2019; Hamouchen, 2019; Odusola, 2014). Egypt's desert agriculture depletes water, Iraq's oil sector pollutes land and water, and Jordan's Red Sea–Dead Sea project poses ecological risks. Sudan's agricultural expansion threatens biodiversity and water security (Borras et al., 2022; Omer, 2019; El Moghazy, 2016; Dixon, 2014). In Yemen and Palestine, war and occupation accelerate environmental degradation, including deforestation and habitat loss (Kambeck, 2014; AL-Zaeem, 2022; Lein, 2022; Carlotti, 2021; Terenzi, 2014; Fields, 2012; Isaac & Hilal, 2011). These issues highlight the tension between economic growth, ecological sustainability, and community well-being.

**Across Arab countries, recurring themes include socio-economic upheavals due to displacement, environmental concerns over biodiversity loss and water resources, and governance challenges related to land tenure and regulation.**

Weak land tenure systems and regulatory oversight hinder effective governance across the region. In Algeria, conservation-led acquisitions overlook socio-economic impacts; Bahrain's urbanization displaces communities without adequate compensation; and Djibouti prioritizes foreign leases over local equity (Cobbett & Mason, 2021; Wan et al., 2020; Antinelli, 2019). In Egypt and Iraq, state-backed agricultural and oil projects marginalize local land rights. In Jordan and Lebanon, conservation restricts access to customary lands, fueling social tensions, while Kuwait's rapid urbanization raises equity concerns. In Mauritania, tenure formalization displaces pastoralists, and in Palestine, environmental justifications obscure land grabs and erode local ownership (African Union Commission/OECD, 2023; Dabash et al., 2023). Instability in Tunisia, Morocco, Lebanon, and Egypt exacerbates regulatory weaknesses, inviting exploitative land deals (Medany, 2016; Alden Wily, 2011). Morocco's solar initiatives underscore the need for stronger laws, clear tenure, and local engagement. Inadequate protections weaken conservation and resistance to land grabs, though grassroots activism is rising, demanding fairness, transparency, and accountability (Fairhead et al., 2012).

Resistance movements have emerged across the region in response to the socio-environmental impacts of land grabbing. In Palestine, farmers engage in "agro-resistance," cultivating land to assert ancestral claims (Panosetti & Roudart, 2024). Elsewhere, community activism counters land dispossession, such as in Tunisia, where locals oppose tourism developments that threaten agriculture and coastal zones (Bush & Ayeb, 2012). These grassroots efforts adapt traditional resistance strategies to modern land pressures, aiming to preserve cultural heritage and ecological balance. They highlight the critical role of local activism in mitigating green grabbing and defending land rights (Mundy, 2017; Green & Smith, 2016).

## Root Cause Analysis

Applying the Land Coalition's RCA Framework to land grabbing issues in various Arab countries uncovered a variety of underlying factors, which can be grouped into four primary categories: economic motivations, social dynamics, political factors, and environmental factors (Appendix B; Table 1).

Countries pursue economic diversification through tourism, urbanization, and foreign investments, often leading to land grabbing and community displacement. Social dynamics reveal increased inequality and disrupted livelihoods, while political instability and top-down policies were found to exacerbate land conflicts. Environmental degradation emerged as a recurring issue, as development and conservation efforts frequently clash with sustainable practices. Overall, economic ambitions often overshadowed socio-economic and environmental concerns, with political factors intensifying these challenges.

**Applying the Land Coalition's RCA Framework to land grabbing issues in various Arab countries uncovered a variety of underlying factors, which can be grouped into four primary categories: economic motivations, social dynamics, political factors, and environmental factors.**

**Economic Motivations:** Energy and agricultural development are major economic drivers of green grabbing in the Arab region, aligning with national goals of energy diversification, food security, and economic growth. Consequently, large-scale projects like Egypt's Benban Solar Park and Sudan's Grand Ethiopian Renaissance Dam (GERD) aim to meet energy demands and boost economic development (International Renewable Energy Agency, 2020; Mekonnen & Hoekstra, 2016). Similarly, agricultural investments focus on irrigation improvements and energy-intensive farming to enhance productivity and reduce food import dependency, addressing challenges like climate change and population growth (International Renewable Energy Agency, 2019).

Meanwhile, Arab countries are diversifying their economies to lessen reliance on oil and gas revenues. For example, Jordan is expanding phosphate and potash mining to support industrial growth (Yusop et al., 2021). Likewise, foreign investors are growing high-value crops such as grapes and olives in Tunisia to take advantage of good conditions and increase export revenues (Ayeb & Bush, 2019). Furthermore, urban development and tourism fuel economic expansion, with Qatar and the UAE heavily investing in luxury infrastructure to position themselves as global business hubs (Henderson, 2014).

This shift is reinforced by investments in housing, transport, and public services to support growing urban populations in cities like Beirut, Doha, and Dubai (Abdallah, 2022). At the same time, foreign agricultural investments, driven by global demand for products like grapes and olive oil, are encouraged through policies that aim to modernize agriculture and promote rural development, though their success varies (Ayeb & Bush, 2019; Borras et al., 2011). Additionally, global disparities in land availability, food production, and capital push investments from capital-rich but land-scarce countries into land-abundant but capital-poor regions. Factors like low land costs, cheap labor, and favorable agroecological conditions attract investors seeking to boost agricultural output (Selod et al., 2018). However, many investments fail due to

overestimated benefits, unfavorable weather, and insufficient public funding for technology and infrastructure (Borras et al., 2022; Wolford et al., 2024).

Finally, global food market dynamics and land speculation significantly shape foreign land acquisitions. Notably, the 2007-2008 food crisis and the 2021-2022 Ukraine war intensified demand for land for food and biofuel production (ReliefWeb, 2014). GCC countries in particular have incorporated foreign agricultural investments into their food security strategies, supported by subsidies and sovereign wealth funds. Nevertheless, targeting fertile land for biofuels or speculation, especially in water-scarce areas, threatens long-term food security (Neudert & Voget-Kleschin, 2021).

**Social Dynamics:** Social dynamics, including power imbalances, marginalization, and unequal land tenure systems, are key factors in land grabbing. Marginalized communities, often with weak land tenure security and limited legal knowledge, are especially vulnerable to land acquisitions for environmental projects. These communities, such as the Haratin in Mauritania, typically lack the economic power and political influence needed to challenge land grabs, making them prime targets for exploitation (Choplin & Dessie, 2017). A key driver of land grabbing lies in the coexistence of customary land tenure systems and formal legal frameworks in many Arab countries. The lack of a unified legal structure, combined with the prevalence of customary rights, allows for large-scale land acquisitions to occur with minimal oversight and local consultation. This lack of clarity over land ownership and the fragmented legal landscape create opportunities for exploitation by those seeking to acquire land for environmental or economic purposes (De Schutter, 2011).

## **Social dynamics, including power imbalances, marginalization, and unequal land tenure systems, are key factors in land grabbing.**

Power imbalances between national elites and vulnerable populations further exacerbate the situation. National governments, which often play a role in facilitating foreign land deals, may do so at the expense of local communities, whose rights may be overlooked or disregarded. This is particularly true in countries where the rule of law is weak, and land acquisitions are facilitated by government policies that benefit the elites. In many cases, these power dynamics leave marginalized communities without the means to defend their land against encroachment (Borras et al., 2012). The lack of community consultation in many land deals in the Arab region is a direct result of this imbalance of power, where local populations are excluded from the decision-making process. The historical weakening of communal land tenure systems also facilitates and enables grabbing. During colonial and post-colonial periods, many countries declared unregistered land as state property, weakening the land rights of local communities. In the aftermath of independence, land reforms often involved redistributing land in ways that disrupted traditional land governance structures, causing conflict and distrust of the state. The dismantling of collective land rights has, in many cases, enabled states to control large tracts of land with little public oversight, facilitating the unchecked allocation of land to political elites, wealthy individuals, and foreign investors. This consolidation of land in the hands of a few powerful actors contributes significantly to the perpetuation of land grabbing.

**Political Factors:** Political factors significantly drive land grabbing in the Arab region, as government priorities, foreign interference, political instability, and weak legal frameworks create conditions for large-scale land acquisitions. Governments frequently

prioritize development projects, such as renewable energy and agriculture, to attract foreign capital and address national challenges (Mousa et al., 2019; Ayeb & Bush, 2019). Meanwhile, the legacy of colonialism and ongoing neo-colonial influences further complicate land governance. Foreign powers continue to intervene, particularly in oil- and gas-rich areas, seeking privileged access to resources. Consequently, such interference destabilizes governance, fuels political tensions, and restricts land access for local populations, especially in conflict zones like Palestine, Lebanon, and Syria. Additionally, political instability and weak governance create power vacuums that allow external actors and local elites to acquire land with minimal oversight. In Yemen, for instance, the ongoing conflict has facilitated land acquisitions under the pretense of environmental projects, exploiting the absence of a stable government (Gaghman, 2020).

Corruption further accelerates land grabbing, as officials often enable deals favoring investors over local communities. In Egypt, corruption in land administration has led to large-scale acquisitions that bypass local land rights and regulations (Bush, 2010), undermining public trust and exacerbating exploitation. Moreover, neoliberal economic policies, promoted by international financial institutions, emphasize foreign investment and economic growth at the expense of local land rights. These policies encourage large-scale acquisitions for environmental projects like biofuels and renewable energy, marginalizing traditional land users. In Morocco, for instance, foreign investments in solar energy have displaced local communities and appropriated communal lands (Rowlinson, 2015).

Simultaneously, weak legal frameworks in countries like Sudan facilitate land grabs, as inadequate legal protections allow investors to acquire land without proper consultation or compensation (Rahmato, 2011), further tilting the power balance in favor of investors.

Finally, state-led development initiatives, often framed as modernization efforts, contribute to land dispossession. Governments prioritize projects such as conservation areas and national parks to attract tourism and investment, frequently displacing local populations. In Saudi Arabia, for instance, conservation projects have forced Bedouin communities from their ancestral lands, disrupting livelihoods and intensifying social tensions (Chatty, 2010). These top-down approaches frequently ignore local needs and rights, deepening political and social conflicts across the region.

**Environmental factors:** Environmental factors are key drivers of land grabbing in the Arab region, as climate change, desertification, and water scarcity exacerbate land degradation and reduce agricultural productivity. Consequently, large-scale environmental projects aimed at combating desertification or managing water resources attract investors. In Egypt and Jordan, such projects have led to extensive land acquisitions, displacing communities and altering traditional land use (Al-Eisawi, 2012).

Similarly, severe water shortages push governments to implement large-scale water management projects, often requiring significant land acquisitions. For example, in Saudi Arabia, irrigation and desalination initiatives in arid regions have triggered land grabs, disrupting local communities and traditional water management systems (Woodhouse & Ganho, 2011). While these projects address water security, they frequently overlook local land rights, leading to conflicts.

Biodiversity conservation also contributes to green grabbing, as the creation of protected areas and national parks in Morocco and Tunisia has resulted in land appropriations from local communities. Although these initiatives protect endangered species and ecosystems, they simultaneously displace populations reliant on the land for their livelihoods, generating socio-environmental challenges (Falkenmark et al., 2019).

## **Environmental factors are key drivers of land grabbing in the Arab region, as climate change, desertification, and water scarcity exacerbate land degradation and reduce agricultural productivity.**

Likewise, land degradation and soil erosion prompt governments and international organizations to implement restoration projects. In Jordan, efforts to combat soil erosion and rehabilitate degraded lands have sometimes displaced communities and disrupted traditional land use (Ziadat et al., 2022).

Finally, rapid urbanization and infrastructure development heighten pressure on land resources, leading to acquisitions for environmental mitigation or urban greening. In the United Arab Emirates, large-scale urban expansion has driven land acquisitions for green spaces and environmental buffers, altering land use and displacing local populations (Hussein & Ahmed, 2016). Collectively, these environmental factors fuel land demand, often at the expense of local communities' rights and traditional land practices.

**Governance and Policy Issues:** Weak institutional frameworks in many Arab countries facilitate green grabbing by failing to regulate land acquisitions and protect local land rights. Consequently, investors acquire land with minimal oversight. In Libya, weak land governance has enabled large-scale acquisitions without consulting local communities (Shaba et al., 2019). Likewise, inadequate land tenure security, as seen in Jordan, leaves communities vulnerable, as unclear land rights make it easier for large-scale projects to undermine local claims (Ziadat et al., 2022).

Moreover, policy fragmentation and poor coordination between government agencies worsen land management issues. In Egypt, conflicting policies across agriculture, environment, and urban development have led to acquisitions that disregard local rights (Bush, 2010). The lack of public participation and transparency in decision-making prioritizes investors over communities, as seen in Tunisia, where conservation projects proceeded without proper consultation (Falkenmark et al., 2019). Similarly, corruption and mismanagement in land administration further enable land grabs. In Sudan, corrupt officials facilitate acquisitions that bypass community rights (Rahmato, 2011).

International financial institutions and development agencies exert pressure on governments to adopt policies favoring large-scale environmental projects. In Morocco, such pressure has driven renewable energy investments that displace local populations (Ben Jebli & Ben Youssef, 2017).

Historically, colonial and post-colonial land policies have shaped a complex tenure system, making communal lands particularly vulnerable. In Sudan, for example, the Unregistered Land Act of 1970 allows state appropriation of unregistered lands, affecting nomadic communities (Zambakari, 2017). As a result, privatization expands,

disregarding the social and cultural significance of communal lands. The shift from traditional governance to privatized land management disrupts local production systems, deepens inequality, and undermines food security (Murombedzi, 2021). Ultimately, weak legal frameworks, corruption, and policy failures collectively drive land grabbing across the Arab region.

**Typology:** The root cause analysis, which identified four primary categories—economic motivations, social dynamics, political factors, and environmental factors—was instrumental in developing a comprehensive typology of land grabbing. By examining these factors, we were able to categorize land grabs in terms of their natural resource dependencies, scale, and the distinction between green and non-green grabbing.

Countries with abundant arable land, water resources, and favorable climates are often targeted for foreign land acquisitions aimed at securing food supplies for investing nations (Cotula, 2013). Conversely, resource-scarce regions invest heavily in foreign agricultural and energy projects to address domestic shortages (Woertz, 2013). Water-rich areas attract large-scale investments in land-intensive irrigation projects, while mineral-rich regions drive resource-extractive land acquisitions (Yusop et al., 2021).

The scale of land acquisitions varies depending on economic and governance conditions. Large-scale land grabs are more common in regions with weak land tenure systems and minimal regulatory oversight, where foreign investors secure vast tracts of land with little resistance (Nolte et al., 2016). In contrast, regions with stronger governance see smaller, more regulated acquisitions often framed as sustainable investments. Additionally, large-scale energy and infrastructure projects, such as renewable energy farms, involve extensive land acquisitions, displacing local populations and altering land use patterns (Ben Jebli & Ben Youssef, 2017).

The distinction between green and non-green grabbing is evident in investment patterns. Green grabbing refers to land acquisitions justified by environmental objectives, such as renewable energy, conservation, or reforestation projects. Large areas are allocated for solar and wind farms, displacing local communities in the name of sustainability (Medany, 2016; Hanieh, 2013). Similarly, conservation efforts in certain regions have led to the appropriation of land for national parks, limiting access for traditional users (Falkenmark et al., 2019). Non-green grabbing, however, is driven by extractive industries, large-scale commercial agriculture, and urban expansion, often disregarding environmental concerns. State-owned enterprises and foreign corporations acquire land primarily for energy production, while urbanization pressures drive land transformations, raising property values and reducing housing affordability (Verhoeven, 2011). Ultimately, the availability of natural resources, the scale of acquisitions, and the environmental framing of land deals determine how green grabbing manifests in the region. While some projects align with sustainability goals, many contribute to displacement, resource depletion, and economic inequalities.

Based on the identified patterns, this paper proposes the following typology categories for green grabbing in Arab countries:

1. Natural resources availability: Countries with abundant natural resources (land and soil) make them susceptible to large-scale, non-green grabs.
2. Scale of the grab: Countries with small-scaled grab or larger scale grabbing. Land grabbing can occur on an intracommunity level or on a larger scale, across boundaries.
3. Non-green grabbing: Countries with weak environmental policies and governance, or countries where land acquisitions prioritize economic gains over environmental sustainability witness significant social and environmental consequences.

**Natural Resources Availability:** The availability of natural resources, particularly water and arable land, emerged as a key determinant of land grabbing. The analysis showed that countries facing severe environmental challenges, such as desertification and water scarcity, are particularly vulnerable to land grabs driven by external investors or governments seeking to secure land for environmental projects or large-scale agriculture.

## **The availability of natural resources, particularly water and arable land, emerged as a key determinant of land grabbing.**

For example, countries like Egypt and Jordan, which are focusing on renewable energy and combating desertification, have seen land acquisitions for solar energy and afforestation projects (Medany, 2016; Hanieh, 2013). These types of green grabbing often lead to displacement but are justified by their environmental goals. In contrast, countries with abundant natural resources like oil and gas, such as Algeria and Iraq, experience land grabs for energy production, which tend to be more focused on resource extraction rather than sustainability. Therefore, the categorization of Arab countries according to natural resources availability provided the following rubrics: (Corsi, & Harris, 2023; Mahdavi, & Vera, 2023; World Bank, 2022; World Bank, 2024; UNEP, 2024; 2020; 2010; 2007; Jum'a, 2023; FAO, 2020a; b; Hamade, 2019; Alawadi et al., 2018; Breu et al., 2016; Medany, 2016):

### **Abundant natural resources (land and soil):**

- ◊ Algeria: Extensive land area with diverse natural resources.
- ◊ Egypt: Significant agricultural land along the Nile Delta and diverse natural resources.
- ◊ Iraq: Rich in agricultural land and natural resources.
- ◊ Libya: Fertile land and soil resources primarily in the northern coastal region.
- ◊ Morocco: Diverse agricultural activities, natural resource potential and improved soil and land management practices.
- ◊ Saudi Arabia: Known for its extensive land resources suitable for agriculture and development.
- ◊ Sudan: Vast agricultural potential and abundant natural resources.
- ◊ Tunisia: Diverse agricultural land and improved soil and land management practices.

### **Limited natural resources:**

- ◊ Bahrain: Small land area, predominantly desert and sandy soil.
- ◊ Djibouti: Arid climate with limited agricultural land and natural resources.
- ◊ Jordan: Scarce water resources and limited agricultural land.
- ◊ Lebanon: Faces environmental challenges with limited arable land resources.
- ◊ Mauritania: Vast Sahara Desert coverage and sandy, infertile soil.
- ◊ Oman: Arid and semi-arid climate, along with its mountainous and desert landscapes.
- ◊ Palestine: Limited land area and natural resources due to geopolitical constraints.
- ◊ Qatar, UAE, and Kuwait: Limited arable land due to desert conditions and water scarcity challenges.
- ◊ Somalia: Arid and semi-arid climate, coupled with frequent droughts and desert terrain.
- ◊ Syria: Overall scarcity of water and prolonged conflict.
- ◊ Yemen: Arid conditions, irregular rainfall, and rugged topography.

**Scale of Grabs:** The scale of land grabs is closely linked to the political and economic conditions identified in the root cause analysis. Large-scale land grabs are often a result of government-driven priorities or foreign interests aiming to secure vast expanses of land for long-term projects. This includes both green grabs—such as renewable energy projects and conservation efforts—and non-green grabs, which focus on resource extraction or commercial agriculture.

In countries with weak institutional frameworks and high levels of corruption, such as Libya and Sudan, land grabs tend to be larger and more exploitative, often bypassing local communities and failing to ensure adequate compensation (Shaba et al., 2019; Rahmato, 2011). Therefore, categorizing Arab countries according to the scale of the grab provided the following rubrics (Corsi, & Harris, 2023; Mahdavi, & Vera, 2023; Jägerskog, & Shawki, 2022; World Bank, 2022a; b; 2021; World Bank, 2018; UNEP, 2024; 2020; 2010; 2007; FAO, 2020a; Hamade, 2019; Alawadi et al., 2018; Breu et al., 2016; Medany, 2016; Scharfenort, 2016; Rizzo, 2014; Mahgoub, 2008):

#### **Large-scale grabs:**

- ◊ Algeria: Significant land area with large-scale agricultural and developmental projects.
- ◊ Egypt: Government-led land reclamation projects and large-scale agricultural initiatives.
- ◊ Iraq: Rich in agricultural land and natural resources, attracting large-scale agricultural investments.
- ◊ Morocco: Large-scale agricultural projects and renewable energy developments, including expansive solar farms.
- ◊ Qatar: Involved in significant land acquisitions for urban development and infrastructure projects.
- ◊ Saudi Arabia and Oman: Notable for investments in large-scale agricultural projects and land acquisitions.
- ◊ Sudan, Somalia, Mauritania and Yemen: Attracts large-scale agricultural investments and foreign acquisitions.
- ◊ Syria: Significant cross-boundary implications and widespread appropriation linked to conflicts.
- ◊ Tunisia: Engages in substantial land acquisitions related to agriculture and conservation efforts.
- ◊ UAE: Large-scale land acquisitions for urban development, tourism, and infrastructure projects.

#### **Small-scale grabs:**

- ◊ Bahrain: Limited land area, which constrains the scope for large-scale land grabbing.
- ◊ Djibouti: Limited agricultural opportunities result in localized small-scale land acquisitions.
- ◊ Jordan: Involves small-scale agricultural projects and localized land disputes.
- ◊ Lebanon: Faces challenges with urban sprawl and small-scale land acquisitions.
- ◊ Palestine: Limited land area and local land disputes lead to small-scale land acquisitions.

**Green and non-green grabbing:** The typology also distinguished between green grabs and non-green grabs. Green grabbing refers to land acquisitions driven by environmental objectives, such as conservation, renewable energy, or sustainable agriculture. Countries like Egypt, Jordan, and Morocco have seen land acquisitions for solar farms, wind energy projects, and biodiversity conservation, which are typically classified as green grabs, although they may still lead to significant displacement and socio-economic inequalities (Medany, 2016; Hanieh, 2013). On the other hand, non-green grabs often involve large-scale agricultural projects or resource extraction that are not primarily focused on environmental sustainability. Countries like Sudan and Somalia, where land is acquired for commercial agriculture or mining, experience non-green grabbing, often with little regard for environmental protection (De Schutter, 2011).

**Green grabbing:** Some Arab countries are increasingly adopting green grabbing practices, focusing on sustainable development initiatives and environmentally friendly land acquisitions (i.e., Algeria, Egypt, Jordan, Lebanon). Countries like Jordan and Egypt are exploring green investments in renewable energy and sustainable agriculture (World Bank, 2021).

**Non-green grabbing:** (Corsi, & Harris, 2023; UN-Habitat, 2022; Jägerskog, & Shawki, 2022; UNEP, 2024; 2020; 2010; 2007; Alawadi et al., 2018; Breu et al., 2016; Medany, 2016; Scharfenort, 2016; Rizzo, 2014; Mahgoub, 2008)

- ◊ Djibouti and Mauritania: The land acquisitions are mainly for economic and strategic purposes, such as port expansions, military bases, and commercial developments.
- ◊ Kuwait: Has seen significant land acquisitions for urbanization, oil and gas infrastructure, and commercial projects.
- ◊ Libya and Bahrain: Face challenges with limited environmental regulations and governance.
- ◊ Palestine and Iraq: Environmental issues exacerbated by war, occupation, and governance challenges.
- ◊ Qatar: The focus is on enhancing infrastructure and supporting its economic ambitions, particularly in energy and finance.
- ◊ Saudi Arabia, Oman, and UAE: Known for large-scale urban developments, luxury real estate, and tourism projects such as artificial islands and high-rise buildings.
- ◊ Sudan, Yemen, and Somalia: Struggles with environmental governance and sustainability practices.
- ◊ Syria: Weak environmental governance and prioritization of economic and strategic gains over sustainability.

In this context, Arab countries are categorized according to Table 2. This categorization provides a comprehensive overview of how Arab countries vary in terms of natural resource availability, the scale of land grabs, and the presence of non-green and green grabbing practices influenced by environmental policies and governance. This typology provides a structured framework for analyzing and addressing the challenges and opportunities associated with land acquisitions in the region, offering insights for policymakers and stakeholders aiming to balance development and sustainability.

Table 2: Typology of Arab countries with accessible data

Country	Abundant natural resources	Limited natural resources
Large-scale grabs	Saudi Arabia	Qatar
	Egypt	Kuwait
	Sudan	UAE
	Iraq	Somalia
	Algeria	Muritania
	Morocco	Yemen
	Tunisia	Oman
Small-scale grabs	Libya	Lebanon
		Jordan
		Palestine
		Bahrain
		Djibouti

 Non-green grabbing

 Green grabbing

## 3. Conclusion

Green grabbing poses significant challenges to local communities and ecosystems in the Arab region. This paper systematically reviews the existing literature on green grabbing, identifying its socio-economic, political, and environmental drivers, as well as its impacts on local populations. By synthesizing evidence from various studies, the paper aims to inform policymakers and stakeholders about the implications of green grabbing and promote more equitable and sustainable land management practices.

A systematic review was conducted following the PRISMA framework for transparency and rigor. The review involved a comprehensive search strategy across multiple databases, which were screened based on predefined inclusion and exclusion criteria. Documents were selected for analysis, focusing on key study characteristics, methodologies, and findings related to green grabbing. An RCA framework was applied to understand the underlying factors driving green grabbing, utilizing data from the literature. A typology was then created to categorize countries in the Arab region based on their unique green grabbing dynamics, identifying common characteristics and patterns, and relying on the underlying drivers provided by the RCA.

The systematic review highlighted significant negative consequences for local communities, including loss of land rights, increased socio-economic inequalities, and adverse effects on local ecosystems. The RCA identified key contributing factors, including policy weaknesses, economic pressures, and social dynamics, highlighting the complexities of land conflicts and the need for strategic approaches to address them. Typology categorization revealed distinct groups, such as natural resources (land and soil), the scale of the grab, and whether the grab is green or non-green, facilitating targeted interventions and comparative analysis.

**To address green grabbing in the Arab region, it is essential to strengthen governance mechanisms for land investments, ensuring they protect local populations, preserve the environment, and promote equitable development.**

The review highlighted several gaps in the existing literature, particularly in understanding resistance strategies and the effectiveness of interventions against green grabbing. While socio-economic, political, and environmental drivers such as land scarcity, water shortages, and conflicting land use policies were well-documented, the literature lacked in-depth analysis of the nuanced impacts of green grabbing on local communities and ecosystems, especially in smaller-scale or local contexts. Furthermore, there is limited research on the intersection of green grabbing with issues like gender equality and indigenous rights, as well as the long-term sustainability of green investments.

The scope of this review focused primarily on the Arab region, encompassing a range of case studies and theoretical approaches. While the analysis provides valuable insights into the dynamics of green grabbing, the quality of the available studies varied, with

some lacking robust methodological rigor or comprehensive data. In particular, there is a need for more empirical studies that track the long-term outcomes of land deals and interventions aimed at curbing green grabbing.

Future research should focus on addressing these gaps, particularly exploring the role of local actors and smaller-scale land acquisitions in green grabbing. A deeper understanding of resistance movements and the effectiveness of governance mechanisms in mitigating negative impacts would be beneficial. Additionally, there is a need for comparative studies across regions to understand how green grabbing dynamics differ in the Arab region compared to other parts of the world.

To address green grabbing in the Arab region, it is essential to strengthen governance mechanisms for land investments, ensuring they protect local populations, preserve the environment, and promote equitable development. Implementing global guidelines such as the Principles for Responsible Agricultural Investment (PRAI) and the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests (VGGT) can enhance transparency, accountability, and sustainability. Accurate land valuation, minimizing speculative investments, and incorporating binding environmental considerations are crucial steps. Transparent and inclusive processes, including Free, Prior, and Informed Consent (FPIC), along with robust legal frameworks, can safeguard vulnerable communities. Regional cooperation is vital for harmonizing policies, improving data quality, conducting joint assessments, and managing shared resources. Organizations like the League of Arab States and the Arab Land Initiative can facilitate these efforts.

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