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## LAND GOVERNANCE AND ENVIRONMENTAL MANAGEMENT IN THE MENA REGION

Robert Home\* 

### ABSTRACT

The importance of governance arrangements for access, use and control of land and resources is being increasingly recognized by international institutions. This paper overviews land governance initiatives being promoted by UN Habitat, and the growing importance of rapidly developing geo-spatial technologies. The paper next addresses land governance issues in the MENA region, particularly the Arab Land Governance initiative, and presents a brief case study of Oman's land governance, and its effects upon society, urban settlement patterns, and land markets. Issues of education and training for better land governance are discussed. Recommendations and conclusions address the issues and ways forward for the region.

**Keywords:** Land governance; surveying; planning; geo-spatial technologies; Oman; MENA region.

### 1. INTRODUCTION 'LAND MATTERS'

'Land matters' was the title of a World Bank report published in July 2023 on the Middle East and North Africa (MENA) region.<sup>1</sup> It claimed that weak governance was worsening an already serious land crisis, and reforms to improve land use and access were urgently needed. According to the World Bank's Vice President for the Middle East and North Africa, 'Now is the time to examine the impact of land issues that loom large in many public policy decisions but aren't always explicitly acknowledged.'<sup>2</sup> The research

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<sup>1</sup> Corsi A and Harris S, *Land Matters: Can Better Governance and Management of Scarcity Prevent a Looming Crisis in the Middle East and North Africa?* (World Bank 2023).

<sup>2</sup> World Bank, 'Weak Governance in MENA Region Worsens Deepening Land Crisis' (18 January 2023) <https://www.worldbank.org/en/news/press-release/2023/01/18/weak-governance-in-mena-region-worsens-deepening-land-crisis>

report found that 84 percent of the region's land was barren, desert or mountain, and only 3.5 percent was cultivated, while pressures of urbanization, climate change, environmental degradation and conflict displacements are all affected by the supply of usable land.

Recognising the need to respond to these challenges, the first part of this paper explores how the UN's Sustainable Development Agenda relates to land governance issues, which affect many of its SDGs.<sup>3</sup> Land is a basic resource both whether as property or environment, and a primary role of nation states is to exercise sovereignty over their physical territory and natural resources, and also over their citizens in relation to land and property. Land governance thus involves laws affecting social relations in land, and also human rights protection. Land governance challenges are making the MENA region's land crisis worse and hindering environmental management efforts. This paper explores some of the land governance initiatives put forward by UN-Habitat and other agencies, the changing role of rapidly developing geo-spatial technologies, and the implications for academia and land governance education and training. It then addresses the particular situation with land governance in the MENA region, focusing on the Arab Land Governance Initiative, and presents a brief case study of Oman's land governance, particularly its land allocation system by lottery, and the implications for society, urban planning and land markets. Finally recommendations arising from the analysis are presented, with closing conclusions.

## 2. THE CASE FOR LAND GOVERNANCE

The majority of humanity do not enjoy secure land rights, yet these are deemed necessary to create sustainable and inclusive societies, and creates a need to accelerate efforts to document, record and recognize people-land relationships in different forms. Land governance relates people to land, and informs about the tenure, use, value and development of land. Good land governance requires the legitimate public land institutions that ensures all citizens receive services that respond to their needs. They should be consistent, predictable, impartial and efficient, and operate with integrity, transparency and accountability, and locally responsive.

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<sup>3</sup> United Nations, *Transforming Our World: The 2030 Agenda for Sustainable Development* (2015) <https://sustainabledevelopment.un.org/post2015/transformingourworld>

In most developing countries, however, the legal framework for land administration is a legacy of foreign colonial rule that often serves only the elite. The processes for land registration are complex, costly and time-consuming, and demand accurate boundary surveys and often legal interventions by notaries, lawyers and courts. The existing legal framework thus can impede a flexible approach to building land administration systems. Such systems form the basis for recording the complex range of rights, restrictions and responsibilities relating to people, policies and places. Effective land administration should, therefore, be fit-for-purpose, appropriate and adequate, interoperable and sustainable, flexible and inclusive, and able to accelerate efforts to document, record, recognize, and monitor people-land relationships in all forms. It thus provides humanity with better access to and security of land and property rights, and can mitigate land issues as a cause of conflict, while leaving no one behind - a commitment of the UN Sustainable Development Agenda. The UN Committee of Experts on Global Geospatial Information Management has accordingly formulated a Framework for Effective Land Administration (FELA), identifying various 'strategic pathways': governance, institutions and accountability, statutory land law and policy, financial aspects of a system, data as the core of land administration, innovation, partnerships, and advocacy, public education and awareness.<sup>4</sup>

Currently the international community has committed itself to the UN Sustainable Development Agenda for the period 2015–2030, which contains seventeen Sustainable Development Goals (SDGs) for member states, each accompanied by separate targets and quantitative indicators. The Agenda depends upon good land governance at national level, and the importance of land as a cross-cutting issue applies particularly to SDGs 1, 2, 5, 11, 15 and 16. The UN Human Settlement Commission (UN-Habitat) is the international agency addressing issues of urban planning and governance, and its headquarters in Nairobi are co-located with the UN Environment Programme (UNEP), responsible for advancing the environmental rule of law.<sup>5</sup> In 2006 UN-Habitat established a Global Land Tools Network (GLTN) as a multi-sectoral alliance of international partners, committed to improving land tenure security and conditions in informal settlements, facilitating adequate and affordable housing, and reducing the impact of

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<sup>4</sup> UN Committee of Experts on Global Geospatial Information Management, Framework for Effective Land Administration E/C.20/2020/2,9/Add.2 (2020).

<sup>5</sup> UNEP, Environmental Rule of Law (Nairobi 2023).

climate change.<sup>6</sup> In rural areas, another major UN agency is the UN Food and Agriculture Organisation (FAO), which promotes good land management of pastures and agricultural land, enables more sustainable food systems, and seeks to prevent and reverse land degradation while conserving biodiversity.

Alongside the Framework for Effective Land Administration the international surveying community through the International Federation of Surveyors has been promoting its Fit-For-Purpose Land Administration (FFPLA) approach as a platform for developing countries to improve through technology their systems for land titling and transactions.<sup>7</sup> A land administration system can provide national governments with an infrastructure for securing land tenure rights, determining the value and taxation of land, and managing the use of land and development within an overall framework of national land policies.

The FFP approach requires a flexible approach in the degree of accuracy of data acquisition, and also in securing different kinds of tenure across a spectrum from informal or customary to full formal ownership. The legal and institutional frameworks should seek to accommodate societal needs in a context of global land agendas and the environmental challenges of the twenty-first century. A 'Minimal Viable Product' philosophy recognizes that one has to start somewhere, with an entry point solution that suits the stakeholders' initial needs, and can later be upgraded in quality and evidence base as required by changing societal needs. Four key FFP principles for building the spatial framework have been identified as: visible physical boundaries (rather than fixed boundaries), aerial/satellite imagery rather than field surveys, accuracy sufficient for the purpose rather than technical standards that may be difficult to achieve, and allowance for upgrading and ongoing improvement. A countrywide land administration solution will generate a larger customer base and create business opportunities, including

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<sup>6</sup> GLTN, *Handling Land: Innovative Tools for Land Governance and Secure Tenure* (UN-Habitat 2012).

<sup>7</sup> UN-Habitat, *Land and Natural Disasters: Guidance for Practitioners* HS: 1254/09E (2010); UN-Habitat, *Fit-for-Purpose Land Administration: Guiding Principles for Country Implementation* HS/033/16E (2016); S Enemark and others, 'Fit-For-Purpose Land Administration—Providing Secure Land Rights at Scale' (2021) 10(9) *Land* 972; S Enemark, 'Responsible Land Governance and Secure Land Rights in Support of the 2030 Global Agenda' (FIG Congress, Warsaw 2022).

the need to incrementally upgrade data quality on land rights. FFPLA requires sustained political will, law reform and provision of technical personnel, the latter being globally in short supply.

The benefits of land governance are now becoming better recognized. Effective systems provide security of tenure as a basis for land and property valuation and taxation, improved access to credit investments, sustainable land use, reduced land conflicts, and better management of land, including state land and natural resources. Women's land rights can be protected by a land administration system, with forced evictions avoided and fair compensation granted. In developing countries, however, the laws and processes to support land administration systems are often deficient, relating in part to the high institutional and financial costs of establishing and maintaining them. Often land registers and cadastral maps may be incomplete, inconsistent, out-of-date and unreliable. Processes for recording land transactions are often complex and distributed over multiple organizations. The FFP approach should ensure that effective local dispute resolution mechanisms resolve as many conflicting claims as possible, but some disputes cannot be resolved locally and have to be considered through other mechanisms, the courts or other tribunals. Once the recorded and adjudicated rights are completed with no known conflicting claims outstanding, then they can be entered into a national land register. This can provide citizens with a certificate of title or occupancy, depending on the right, its status and the underlying legal framework, a right which can be incrementally upgraded over time. A basic state institution for land governance is thus the central government's register of land rights and responsibilities, variously called the cadaster, deeds register or land registry: an official guaranteed record of the location, value, and ownership of land and property, defining the various rights and responsibility, including tax liabilities. It should clarify and protect the housing, land and property rights of individuals and groups. As argued by the influential economist Hernando De Soto, secure property rights can assure peace, social stability and sustainable development, and he made an ambitious claim was that they may even offer the cure for world poverty.<sup>8</sup>

As the planet's human population grows and increasingly lives in urban areas, land governance becomes important for urban planning and citizen participation. The New Urban Agenda, linked to the Sustainable

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<sup>8</sup> De Soto H, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (Black Swan 2000).

Development Agenda and endorsed at Habitat III in Quito in 2015, has stimulated academic interest in the idea of ‘urban law’, mainly concerned with property tax, municipal regulations, housing and urban planning.<sup>9</sup> The need to improve local revenues through land-based financial systems is a priority.<sup>10</sup> Resilience for disaster risk reduction places additional demands, especially upon local governments.<sup>11</sup> The GLTN has been developing and testing at country level some twenty ‘land tools’, of which two in particular have shown promise and are being adopted.

Firstly, the Social Tenure Domain Model (STDM) offers a standard for representing people–land relationships at different levels of formality, legality and technical accuracy.<sup>12</sup> To give one example, community leaders in the Kenya Informal Settlement Improvement Project introduced STDM in 2011 as a map-based tool for advancing tenure regularization. Data on ‘structures’ (‘slum houses’) and ‘users’ were collected, linked, verified and digitized, thus providing evidence on land tenure that could be used for occupiers to negotiate with the authorities and help avoid evictions. Conflicts arising from double or triple selling of land and structures were reduced, and information on utilities, sanitation and facilities was used to push for installation of public toilets and negotiate for the removal of a huge open sewer in the settlement. STDM has thus empowered and enabled poor communities to influence planning decisions, with participation and transparency being actively encouraged. Electricity is now available across the slum, which has a five-year improvement/development plan. This STDM project has thus empowered a slum community to significantly improve their environment and security of tenure.<sup>13</sup>

A second GLTN initiative being applied in various development projects is Participatory and Inclusive Land Readjustment (PILaR). This seeks to

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<sup>9</sup> Davidson N and Tewari G (eds), *Global Perspectives in Urban Law: The Legal Power of Cities* (Routledge 2019).

<sup>10</sup> Franzsen R and McCluskey W (eds), *Property Tax in Africa: Status, Challenges, and Prospects* (Lincoln Institute of Land Policy 2016).

<sup>11</sup> Pearson L and Pelling M, 'The UN Sendai Framework for Disaster Risk Reduction 2015–2030: Negotiation Process and Prospects for Science and Practice' (2015) 2 *Journal of Extreme Events* 1571001.

<sup>12</sup> Lemmen C, *The Social Tenure Domain Model: A Pro-Poor Land Tool* (FIG Publication 52, Copenhagen 2013).

<sup>13</sup> Meredith T, 'Partnerships for Successes in Slum Upgrading' in Home R (ed), *Land Issues for Urban Governance in Sub-Saharan Africa* (Springer Nature 2021) 237.

supplement the pre-existing land readjustment model with a more inclusive negotiation process: it pools land-ownerships to plan urban extensions, increase densities, and finance better physical infrastructure, public space and other amenities. Such initiatives can narrow the gap between centralised control approaches and the reality of people's needs on the ground, through a less confrontational approach than compulsory expropriation.<sup>14</sup>

### **3. RECENT APPLICATIONS TO LAND GOVERNANCE FROM GEO-SPATIAL TECHNOLOGY**

Understanding maps and spatial data have not traditionally been part of the professional education for lawyers, but recent developments in remote sensing and geo-spatial data handling are transforming many areas of land governance and law, and have particular relevance for regulation and monitoring of the SDGs, which requires the attention of environmental lawyers.<sup>15</sup> Geospatial information is becoming a major contributor to socio-economic transformation in many countries, yet there is still little awareness and understanding of this vital role and the need for enabling architectures, such as national spatial data Infrastructures. This lack of awareness is common at the policy and decision-making levels in developing countries. Geospatial information has, however, immense societal and economic value. Citizens, communities, academia, business sectors, governments, and many other stakeholders benefit, on a daily basis and often unknowingly, from the use of geospatial information and related location-based services. The most familiar aspects of daily life that employ geospatial information are seeing and knowing where we are on mobile devices and navigating from one location to another, but it can do so much more with advanced data processing.

The United Nations' Integrated Geospatial Information Framework (UN-IGIF), adopted in 2018, is undertaking a global role designed specifically for

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<sup>14</sup> UN-Habitat, *Remaking the Urban Mosaic: Participatory and Inclusive Land Readjustment* (Nairobi 2016); Chavunduka C and others, 'Stocktaking Participatory and Inclusive Land Readjustment in Africa' in R Home (ed), *Land Issues for Urban Governance in Sub-Saharan Africa* (Springer Nature 2021) 137.

<sup>15</sup> C Lemmen and others, 'How Geospatial Surveying Is Driving Land Administration: Latest Innovations' (2020) 34 *GIM International Newsletter* 25. C Lemmen and others, 'Remote Sensing for Land Administration: Innovations Based on Remotely Sensed Data' (*GIM* 23 May 2023)



low to middle income countries and small island developing states.<sup>16</sup> It can improve and coordinate activities to align between and across existing national agency capabilities, guiding countries to develop, manage and refine their national geospatial information resources, so that all countries can develop and contribute to an international and potentially global geospatial information ecosystem. UN-IGIF has the global mandates required to make joint decisions and set directions on the production, application and use of geospatial information within national, regional and global policy frameworks, and to support the 2030 Agenda for Sustainable Development. National geospatial information applications include road navigation and maintenance, and statistical data for planning health and education facilities. Responding to natural or man-made disasters requires geospatial information in many forms: characteristics of the affected populations, mapping of affected transport routes to facilitate rapid response, co-ordinating with current weather conditions and forecasts.

Innovative methods for data acquisition and analysis are moving forward apace. Ground-based and photogrammetric/remote-sensing techniques are converging, assisted by developments in artificial intelligence and machine learning. The growing use of UAVs (unmanned aerial vehicles, or drones) reflects their relative cheapness and ease of use when compared with satellite imagery. The geospatial and surveying industry is thus transforming from its traditional role of data collection to focus also on data analysis, integrating geospatial and climate data to achieve collaborative solutions. Remote sensing techniques no longer require intensive fieldwork with satellite images or aerial photographs to identify property boundaries, roads and paths, and connected parcels or buildings. A few examples show the potential of these evolving remote sensing applications.

Remote sensing for Africa has shown how unevenly the continent's human population is distributed, a situation which has major planning and policy implications. In 2010 some 90 per cent of its population occupied only 21 per cent of the land, many in crowded cities and densely populated countries, while the remaining 10 per cent is distributed across the rest of the land, which includes mountains and deserts such as the Sahara, where extreme temperatures and lack of water make them nearly uninhabitable.<sup>17</sup> Another

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<sup>16</sup> UN-GGIM, *Integrated Geospatial Information Framework: A Strategic Guide (2023)*.

<sup>17</sup> Linard C and others, 'Population Distribution, Settlement Patterns and Accessibility across Africa in 2010' (2012) 7(2) PLoS ONE e31743.

example of satellite data being analysed in research has shown the significant differences in urban forms that were created by past government policies in the former British and French African colonies: British colonial indirect rule and apartheid policy resulted in townships that excluded by racial segregation regulations Africans to the 'septic fringe' of African reserves or tribal trust land.<sup>18</sup>

Geo-spatial technology is increasingly being applied to cadastral surveying, as recent projects in Mexico, Rwanda and Ghana have shown. In Mexico local authorities typically operated their cadastral records with text-based alpha-numerical indexed property registries, ten-year-old aerial photographs and some paper-based property boundaries. Federal government funding has recently supported the building of a geospatial dataset, with software and restructured processes obtained from vertical and oblique imagery. The use of relatively cheap UAVs allowed data updates at micro-coverage level (accurate to centimeters), recalculating the floorspace in a property for updating the cadastral register, verifying compliance with building permits and tracking unauthorized construction. The project claimed that a four-fold increase in property tax revenues had been made possible by the new technology.<sup>19</sup> In Rwanda a pilot project to collect data on land and buildings for developing and maintaining a cadaster was able to survey some 175,000 buildings in 55 days by some 120 data collectors, costing only about US \$1.30 per building – far less than previous field survey methods.<sup>20</sup> In Ghana 8,500 hectares in a hard-to-reach mountainous area were resurveyed with the new technology. The only previously available data was in the form of a paper map, but new survey technologies allowed ownership boundaries to be digitally converted and imported into a mobile application used by local people on their smartphones, thereby creating a digital land information system to help compensation valuation in the land acquisition process. Each farm owner for the first time could know the boundaries and extent of their land to meter accuracy, and captured in a comprehensive database. The project was completed in four months, compared with the twenty months

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<sup>18</sup> Baruah NG and others, 'Colonial Legacies: Shaping African Cities' (2021) 21 *Journal of Economic Geography* 29.

<sup>19</sup> Audirac F and Partida J, 'Cartomorphosis: An Evolution that Starts with Cadastre: To Govern or Not to Govern? Territory Is the Question!' (2023) *GIM*.

<sup>20</sup> Koeva MN and others, 'Remote Sensing for Property Valuation: A Data Source Comparison in Support of Fair Land Taxation in Rwanda' (2021) 13(18) *Remote Sensing* 1.

estimated using traditional surveying methods, and allowed not only significant cost savings but also greater accuracy.<sup>21</sup>

At the global level Planet Scope Monitoring is a commercial venture that provides a high-resolution, continuous view of the world from above, derived from multiple terabytes of miniature satellite data acquired by a high-powered telescope and camera. This can observe areas of interest for patterns, because the system can re-image the earth daily. Analysis of such data can monitor changes and identify trends, and be applied as extensions to desktop GIS tools to provide mosaics of imagery, while automated analytics can detect changes at local level through machine learning. Specific applications include climate monitoring, crop yield prediction, urban planning, disaster response conditions, soil water content, land surface temperature, crop biomass, forest coverage, and vegetation encroachment or loss.<sup>22</sup>

Applications for geo-spatial technologies thus exist in multiple fields, which include spatial planning and development, protecting state lands, securing land tenure, real estate market analysis, land reform and consolidation, forestry, soil protection and environmental measures. The physical changes caused by earthquakes, volcanic activity and tsunamis can be monitored, as well as the extent and impacts of drought conditions, wildfires and local extreme weather events. As an example of applications for the management of physical heritage, 3D photogrammetry made possible the reconstruction of virtual digital twins of the Palmyra Unesco World Heritage monuments in Syria, which were subsequently physically destroyed on the ground during the period of ISIS occupation in 2015, but preserved in digital form.<sup>23</sup> Boundary demarcation and buffer zones are essential to manage land resources in protected areas such as game parks and forests, and to record and protect local communities' rights to land and natural resources. In order to improve climate change resilience the occurrence of heat-waves and prolonged droughts can be analyzed to predict their impact upon energy and

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<sup>21</sup> Quaye-Ballard NL and others, 'Application of Smart Technologies in Cadastral Surveying of Large Areas in Ghana' (FIG Congress, Warsaw, Poland, 11-15 September 2022).

<sup>22</sup> 'Planet Satellite Imagery for GIS Professionals' (Planet.com 2022) <https://www.planet.com/>

<sup>23</sup> Al Kuntar S and Zucker S, 'Palmyra: The Modern Destruction of an Ancient City' (Smarthistory 2018).

water infrastructure demand.<sup>24</sup> Citizen frustration with basic infrastructure shortages of water, electricity and sanitation is pushing them to organise and negotiate improvements, and improved geo-spatial technology can help citizens to engage locally in land governance, as the Ghana example showed, creating a shared sense of citizenship and new forms of social capital with formal and informal rules. Networks of local community actors can be maintained, and land surveyors can forge an on-going relationship with local communities through participatory mapping exercises, which can help local communities to curate their collective memory and perhaps develop tourism opportunities.<sup>25</sup>

#### **4. LAND GOVERNANCE IN THE MENA REGION**

Using the Nigerian EE as a case study, it was found that eco- The MENA region is usually regarded as falling into three sub-regions: the Gulf states (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates within the Gulf Consultative Council, and Yemen outside), the Maghreb (Algeria, Libya, Mauritania, Morocco and Tunisia), and the Mashreq, meaning the 'Place of Sunrise', between the Mediterranean and Iran (Egypt, Iraq, Jordan, Lebanon, Sudan and Syria). The region's current population is about 450 million, and its urban population is predicted to increase some 60% by the year 2050. The region's rapidly expanding population is found increasingly in urban areas, often as a result of displacement by conflict and climate change. The Gulf states may be among the richest countries in the world, yet other countries in the region are fragile or failing states with extreme levels of poverty and unemployment. Individual country populations range from Egypt with some 100 million to Djibouti with less than a million. The largest country by land area is Algeria, mostly desert at 381,740 sq.km.; the smallest (a non-state entity) is the Gaza Strip at 360 sq.km. with a population density of over five thousand people per sq.km. The creation of the state of Israel in 1948 led to a major transfer of land from Arab to Jewish control, and the recent Israel-Gaza conflict has revived attention to the estimated 7 million people of Palestinian origin with no secure land tenure. Many of these still have refugee status in Lebanon, Syria, Gaza, the

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<sup>24</sup> Sharma R and Augustinus A, 'The Role of Surveyors in Building Climate Resilience' (2023) GIM.

<sup>25</sup> McCall MK, 'Participatory Mapping and Participatory Cartography in the Urban Context Utilizing Local Spatial Knowledge: A Bibliography' (2019) CIGA, UNAM, Morelia, Mexico.

West Bank, and Jordan (which is the only Arab country to grant citizenship to Palestinians, who now comprise half of its population), and those who remained in Israel after 1948, who by 2020 had increased tenfold to comprise about 17% of Israel's citizens, are often referred to as Arab Israelis, with a second-class status vis-a-vis Jewish citizens).<sup>26</sup>

Most of the region had been under the rule of Ottoman empire for centuries until its collapse after the First World War, and the Ottoman Tanzimat reforms from the mid-19<sup>th</sup> century resulted in the region's first comprehensive registration of land rights in the form of the tabu system, which certified the right to use a plot of land for agriculture after three year of temporary ownership and paying taxes. Such miri land was one of five basic categories in Ottoman land law, the others being mulk (full private ownership), matruka (withdrawn or reserved government land), mawat ('dead' land, including desert and mountain, unused), and waqf (held in trust for religious or charitable purposes).<sup>27</sup> These historic categories have largely survived in the post-Ottoman states of the MENA region.

Climate change impacts on the region are rapidly becoming urgent priorities.<sup>28</sup> Refugees and internal displacement are major issues, with barriers to accessing land created by unequal ownership, and families and whole communities being displaced. Traditional communal land management practices have been disrupted, such as musha'a (village-based reorganisation of land) and aflaj (community-maintained ancient irrigation channels). Institutional fragmentation and weak local governance aggravate land tenure insecurity, discourage investment and damage the functioning of the land sector. Law reforms may be sought but are rarely achieved, and land-based revenue-raising options remain weak, while better land use management is needed to respond to climate change, population growth, environmental pressures, and social issues of inequality and property market failures. Political instability and conflict in several MENA countries has been causing

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<sup>26</sup> R Home, 'An "Irreversible Conquest"? Colonial and Postcolonial Land Law in Israel/Palestine' (2003) 12(3) *Social & Legal Studies* 291; Home R, *Mapping the Refugee Camps of Gaza: The Surveyor in a Political Environment* (RICS Our Common Estate series, London).

<sup>27</sup> Home R, 'Scientific Survey and Land Settlement in British Colonialism, with Particular Reference to Land Tenure Reform in the Middle East 1920-50' (2006) 21(1) *Planning Perspectives* 1.

<sup>28</sup> Al-Maamary HMS, Kazem HA and Chaichan MT, 'Climate Change: The Game Changer in the GCC Region' (2017) 76 *Renewable and Sustainable Energy Reviews* 555.

widespread land tenure insecurity, reflected in multiple disputes over land and housing, dysfunctional land registration, growth of informal and unauthorised settlements, illegal appropriation of property, and unaffordable land and housing prices.

Recognising the region's severe problems related to land, in 2016 the GLTN and partners launched the Arab Land Initiative, which was reviewed in its Arab Sustainable Development Report in 2020.<sup>29</sup> The GLTN and partners include international rural and urban civil society organizations, research and training institutions, bilateral and multilateral organizations, and international professional bodies. The programme has committed to promoting equal access to land, peace, stability and economic growth, to be achieved through better land governance, developing capacities, increasing collaboration, and sharing best practices. In-country projects and capacity assessments that have already been undertaken include Somalia, Libya, Yemen and Palestine. Any progress toward a long-term solution for the Israel-Palestine conflict will inevitably require complex and difficult arrangements for land demarcation and governance, perhaps involving redistribution and exchanges of land and populations, as has occurred before in many parts of the region.

Two specific issues for action identified in the regional land programme are dispute resolution and women's rights, reflecting changes in government and land tenure laws that have created over the years multiple land rights violations, dispossessions and forced evictions in many MENA countries.<sup>30</sup> Libyans, for instance, have little trust or confidence in the formal court system for resolving land cases, and some doubt whether it still functions, do not trust it and cannot afford the associated costs. As a result alternative mechanisms have emerged, such as peace and conciliation committees and other customary approaches, whereby elders of families and tribes discuss and determine disputes independently from the state.<sup>31</sup>

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<sup>29</sup> [www.arabstates.gltm.net](http://www.arabstates.gltm.net) or [www.gltm.net](http://www.gltm.net)

<sup>30</sup> Wehrmann B, 'Land Conflicts—A Practical Guide to Dealing with Land Disputes' in Scoping and Status Study on Land and Conflict HS/050/16E (UN-Habitat, Nairobi 2019).

<sup>31</sup> UUN-Habitat, Land Administration and Land Rights for Peace and Development in Libya, Report 6/2023, and Assessment of the Land Sector in Yemen (2023).

Land disputes may arise in relation to women, who have been especially disadvantaged by the loss of many male heads of households in the various regional conflicts. They often may have to renounce their property shares under Islamic and constitutional rules in favour of male relatives, either by choice or by coercion.<sup>32</sup> The land of the tribe, essential for grazing, agriculture and livelihoods, had been acquired and preserved historically by force of arms. The custom is to keep the lands for male family members, while movable assets such as money and gold are given to women to prevent possible transfers of landed property to non-family members. Whatever international and national laws may declare equal treatment for women and men, the reality is that customary practices continue, creating unresolved tensions between the individual land rights of men and women, and affecting the management arrangements for communal lands. In Syria, for instance, which is still emerging from a damaging civil war involving mass displacement of people, those advocating women's property rights are engaged in multiple difficult dispute resolution situations.<sup>33</sup> Impeding land access are the social norms and laws regarding property that are more unfavorable for women compared to other regions, according to the report. In particular, women in MENA countries come under strong social pressure to renounce their inheritance rights over property, often without fair compensation. Land policies can potentially help reduce gender inequalities, if political will exists.

## 5. OMAN PLANNING AND LAND ISSUES

This section presents a short country case study of some of the land governance issues in Oman, which hosted the conference at which this paper was originally presented.

Oman is strategically located to dominate the entrances into the Persian/Arabian Gulf, and has historically exercised influence over neighbouring Iran and India, and as far down the East African coast as Zanzibar. Oman was until recently geographically isolated, with limited

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<sup>32</sup> UN-Habitat, *Women and Land in the Muslim World: Pathways to Increase Access to Land for the Realization of Development, Peace and Human Rights* (Nairobi 2018).

<sup>33</sup> Anak ME, 'Securing Housing, Land and Property Rights for Syrian Displaced Women' (Master dissertation in Development Policies, Graduate Institute of Geneva 2021).

education, health systems and government, and its rural land resources were managed largely through a system of mutual self-reliance. European colonial powers from the 16<sup>th</sup> century took advantage of its strategic location, and from the 19<sup>th</sup> century its rulers became dependent upon British loans and advisers. Oil has brought new wealth to the country in the last half century, but has come somewhat later than the five other state members in the Gulf Cooperation Council. Its independence from British control was confirmed by treaty in 1951, and national unification was delayed by tribal uprisings that were suppressed with British military assistance. The Sultan Qaboos who emerged successfully from these conflicts ‘domesticated’ the local elites by granting them ministerial positions and other privileges.<sup>34</sup> The 1996 Basic Law operates as a constitution for the country, amended in 2011 as a response to protests during the so-called ‘Arab Spring’. The Sultan presides over the Council of Ministers, with a Consultative Assembly of 90 elected members from the provinces responsible for reviewing legislation and submitting (political parties not allowed). In 2010 the UNDP ranked Oman as the most improved nation in the world in terms of development, and its current population of some 6 million is projected to grow to some 7.5 million by 2040. Its government’s 2040 Vision aspires to reduce oil dependence by diversifying the economy, and it is the fastest growing tourism destination in the Middle East, as well as being one of the world’s largest producers of dates, which still accounts for half of its agricultural area.<sup>35</sup>

Oman covers a land area of 309,000 km<sup>2</sup>, with a low population density of 15 per sq.km, and three quarters of that land area is desert or mountains, placing pressure on the remaining land required for many uses, like much of the MENA region. The Sultan, of the Al Said dynasty established from 1741, is one of the two absolute rulers in the sub-region (the other being Saudi Arabia), and under Islamic law is the ultimate owner of all land which he holds in trust from God. He is the largest personal land-owner, and traditionally conferred upon male heads of family land for a home and rural land, with currently some 787000 agricultural land holdings.<sup>36</sup> Rural development has dislocated many traditional rural systems, as demand grows

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<sup>34</sup> Valeri M, *Oman: Politics and Society in the Qaboos State* (Oxford University Press 2013).

<sup>35</sup> Wippel S (ed), *Regionalizing Oman: Political, Economic and Social Dynamics* (Springer 2023).

<sup>36</sup> Cahill K, *Who Owns the World*



for water, land, education, health, housing and other goods and services.<sup>37</sup> The country's traditional aflaj water supply networks were accorded UNESCO World Heritage status in 2016, but have been by-passed by modern water distribution networks.<sup>38</sup> As oil revenues have transformed the country, affluent families moved into more luxurious homes, and coastal development (or littoralization) now dominates the present urban fabric, especially along the northern coast.<sup>39</sup>

With regard to land governance arrangements, the Omani government is currently consulting on how to improve legal and institutional frameworks for its spatial planning, in collaboration with UN-Habitat, and modernizing its land information with satellite imagery to plan for land use change.<sup>40</sup> The new national urban strategy guides urban development, with the main cities integrating with their adjacent communities to form new economic zones, and natural and cultural heritage is protected by a network of nature reserves, heritage and conservation areas.<sup>41</sup> While decrees have been passed to protect various endangered species, Oman has the unfortunate distinction of being the first country to have a site inscribed and subsequently deleted from UNESCO's World Heritage List, following a government 2007 decision to remove most of the huge protected desert area to allow prospecting for oil. In spite of increased concerns over energy consumption, natural resource depletion, and greenhouse gas emissions that may in time make the region effectively uninhabitable from climate change, there has been so far limited local research in the country about these issues. One exception was a recent research project that compared thermal and energy performance of different housing designs, and found that vernacular dwellings had better thermal

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<sup>37</sup> RW Dutton, *Changing Rural Systems in Oman: The Khabura Project* (Routledge 1999).

<sup>38</sup> AS Al-Marshoudi and J Sulong, 'Institutional Arrangements of the Aflaj Systems' Maintenance in Sultanate of Oman' (2023) 9 *Sustainable Water Resource Management* 30.

<sup>39</sup> von Richthofen A, 'Desert Sprawl, Rapid Urbanisation: The Transformation of the Desert in Oman' (2015) 93 *Topos* 96.

<sup>40</sup> Ruheili, A & Wardy (2023), *The Role of Geographic Information System in Environmental Planning and Management in Oman*, Government of Oman.

<sup>41</sup> 'Strengthening Spatial Planning Law in Oman' (Muscat Government Press Release, 13 March 2023).

performance than their modern counterparts, requiring less air conditioning for cooling.<sup>42</sup>

The Omani government has since the 1980s operated a system of allocating housing land to its citizens in need through a lottery, which grants every qualifying Omani citizen (initially only male, but since 2003 also female) the right to enter the lottery and eventually receive a building plot in a new housing area.<sup>43</sup> Applicants can indicate their preference for location, but are not guaranteed their choice; the allocated plot remains state property, and citizens are expected to develop their plot themselves; fees are minimal and the government receives no direct returns from the allocation process, while staying responsible for planning the new districts and providing road, energy, water and waste infrastructure.<sup>44</sup> Applicants may wait up to three years for allocation of a plot, and are only entitled to one draw. The Ministry of Housing zones districts of 2000 and more plots, which is intended to create a pool for the system while the planning process is being completed and any infrastructure installed. In 2023 the Ministry of Housing and Urban Planning announced the latest distribution of 23,000 new residential plots, registering over 30,000 applications for verification and registration, and supporting 1,200 families under the programme.<sup>45</sup>

Such a system of managed allocation of land for individual house-building is not unique, as European and African cases illustrate. In 19<sup>th</sup> century England, for instance, as population growth increased housing demand, freehold land societies (precursors of later building societies) bought housing land on large sites for subdivision into individual plots, which were then allocated by lottery to members with savings, who were expected to develop by them according to the society's building requirements.<sup>46</sup> In Botswana, like Oman country with large areas of desert and low population density, citizens can

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<sup>42</sup> Al-Hashim A and others, 'Evaluating the Sustainable Features of Vernacular Architecture in Hot-Arid Regions: Field Surveys and Analysis in Two Vernacular Houses in Al Batinah Region (Oman)' (2023) *Architectural Engineering and Design Management* <https://doi.org/10.1080/17452007.2023.2232357>

<sup>43</sup> Ministry of Housing, Oman, *Land Allocation by Lottery* (Muscat 2009).

<sup>44</sup> Al Shueili KSM, 'Towards a Sustainable Urban Future in Oman: Problem and Process Analysis' (PhD thesis, Mackintosh School of Architecture, University of Glasgow 2015).

<sup>45</sup> *Oman Observer* <https://www.omanobserver.om/article/1133006>

<sup>46</sup> Home RK, 'Peri-Urban Informal Housing Development in Victorian England: The Contribution of Freehold Land Societies' (2010) 25(3) *Planning Perspectives* 365.

apply under the Tribal Land Acts for an allocation of land, which can be provided in three types (residential, garden and grazing).<sup>47</sup>

The Oman system has produced some perhaps unforeseen negative side-effects. It has been criticised for creating ‘unsustainable’ urban sprawl, as plots may be allocated far from established centres, requiring car-based mobility and high use of energy, material and spatial resources. The lottery was intended to have a social engineering function, building a modern society by mixing the separate tribes of Oman in the new housing areas, but in practice plots have often been retained in tribal groupings in the new neighborhoods, undermining the concept of central allocation.<sup>48</sup> Infrastructure provision may lag behind, from which neither the occupiers nor the government benefit. The land allocation system also seems to have helped create a distorted real-estate market that may exclude the intended beneficiaries. Undeveloped land (called ‘white land’ in Oman and Saudi Arabia) may be withheld from the market and transferred to better-off Omanis or non-Omanis, contributing to increased land prices.<sup>49</sup> Real-estate price distribution for the Muscat capital area (analysed from real estate advertisements in 2010) showed significant spatial fragmentation and polarization, and the creation of a society of rentier landlords, causing Oman (as with other states in the Gulf) to be described as a ‘hyper-centralized rentier state’ with a monopoly-like economy.<sup>50</sup>

## 6. EDUCATION AND TRAINING IN LAND GOVERNANCE

The complex global problems of environment and the SDGs are taking academic researchers beyond their traditional disciplinary boundaries. Inter-disciplinary and post-disciplinary research involves academia organizing around themes or specific problems, synthesizing disciplinary perspectives to

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<sup>47</sup> Kalabamu KT, 'A Commentary on Botswana's 2019 National Land Policy' (2021) 108 *Land Use Policy* 105563.

<sup>48</sup> Heim B and others, 'Land-Allocation and Clan Formation in Modern Residential Developments in Oman' (2020) 5 *City, Territory and Architecture*.

<sup>49</sup> von Richthofen A, 'Urban Oman—Trends and Perspectives of Urbanisation in Muscat Capital Area' (2016) *Habitat International*, LIT Verlag, Berlin.

<sup>50</sup> Belgacem, M (2011), "Land Market and Social Space in Muscat, Oman", *Cybergeo: European Journal of Geography* [in French] <https://doi.org/10.4000/cybergeo.23832>; Belgacem, M. "Modern Transformations in the Urban Social Structure in Muscat City", 2014 *Journal of Arts and Social Sciences* 5(1): 5-20.

address complex issues through integrated and holistic knowledge. Difficult or ‘wicked’ problems have many facets, and a diverse grouping of specialists, each bringing their own perspectives and tools, may be better equipped to tackle such problems than any single discipline alone.<sup>51</sup> The so-called ‘land professions’ of lawyers, surveyors (or geo-spatial scientists), environmental managers and urban planners can partner with other academic specialisms that have much to contribute, such as social anthropologists, ethnographers, economists, historians, geographers, ecologists, earth-, soil- and bio-scientists.

To help build up adequate staffing for land governance the GLTN published in 2019 a set of teaching materials to provide a structured knowledge base for education and training.<sup>52</sup> The Network of Excellence on Land Governance in Africa, created by the African Union Commission, also works towards improving public administration and professional practice, and sponsors the African Journal of Land Policy and Geospatial Sciences, based in Rabat (Morocco).<sup>53</sup> Academic institutions can also partner with communities to help realize the SDGs, examples of such interactions including law clinics and advice centres, ‘living labs’ for university-community engagement, and social entrepreneurship programmes. Successful partnerships require sustained commitment, open dialogue, and a willingness to adapt to the needs of the communities that they serve. Such joint projects may focus on local development needs, e.g. student-led initiatives that address SDG-related issues within the community, joint public events and campaigns, and projects and capacity-building activities for workers in cities/municipalities.<sup>54</sup>

As part of capacity-building to create locally specialists in land governance, Egyptian consultants to the Arab Land Initiative reported in 2023 on the quantity and thematic coverage of existing learning provision in the three MENA sub-regions. It set out to identify gaps and opportunities that could complement the existing ‘learning offer’, and advance the establishment of

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<sup>51</sup> T Becher and PR Trowler, *Academic Tribes and Territories: Intellectual Enquiry and the Culture of Disciplines* (OUP 2001).

<sup>52</sup> UN-Habitat, *Teaching Essentials for Responsible Land Administration HS/053/22E* (2023) <https://revues.imist.ma/index.php/AJLP-GS>

<sup>53</sup> Available at <https://revues.imist.ma/index.php/AJLP-GS>.

<sup>54</sup> Leal Filho W and others, 'Mapping Universities Communities Partnerships in the Delivery of the Sustainable Development Goals' (2023) 11 *Frontiers in Environmental Science* 1246875

more comprehensive curricula on land governance across the region.<sup>55</sup> The 'learning offer' in the Mashreq subregion was found mostly in the field of spatial and land-use planning, followed by geospatial sciences, and the report recommended areas of law and governance that could reorientate and address the new challenges in areas such as land dispute resolution, social sciences, real estate/valuation/taxation, and land-based finance. In the Gulf sub-region the emphasis in existing courses was on spatial planning and geospatial studies, with more emphasis on real estate valuation and taxation, and there was also much provision of short courses, well marketed and accessible online. The Maghreb sub-region had the most diverse offer, and a relatively high number of courses on land-related legal and justice aspects, mainly found in universities, and also had a higher number of training institutes, international organizations and private companies providing land-related courses. The study considered that regional provision revealed fragmented knowledge in the field of land governance, and a lack of relevant curricula on land tenure, land value and land dispute resolution. The report recommended more provision of land management and governance programmes at undergraduate level, with short courses to build capacities rapidly in particular areas. Environmental law was seen as a relatively new academic sub-discipline in the region, which can be expected to develop rapidly through a cross-disciplinary approach to the new challenges, creating a new generation of environmental specialists including lawyers and land managers. The SDGs were seen to offer a framework and focus for revising or creating new higher education course syllabi, especially as knowledge about the SDGs is surprisingly lacking at the level of local government, where many of the challenges need to be tackled.<sup>56</sup>

## 7. RECOMMENDATIONS AND CONCLUSIONS

Derived from the foregoing sections, the following recommendations for improving land governance in the MENA region are proposed:

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<sup>55</sup> UN-Habitat, Teaching Essentials for Responsible Land Administration HS/053/22E (2023) <https://revues.imist.ma/index.php/AJLP-GS>

<sup>56</sup> Yara E and others, 'Urban Climate Change Governance within Centralised Governments: A Case Study of Giza, Egypt' (2021) Urban Forum <https://doi.org/10.1007/s12132-021-09441-9>

- 7.1. Establish more comprehensive national registries of rights and responsibilities in land. This would facilitate registration of land rights, to include private and public property, and protected areas for defence, heritage, biodiversity and nature conservation.
- 7.2. Reinforce planning and land policy as necessary to support more efficient land use and management, and ensure that land can serve its social, economic and fiscal functions. A holistic approach, supported by geo-spatial information technology, can make strategic trade-offs about the best use of land to meet competing economic, social, and sustainability objectives. Land governance guidance should also be included to plan for emergencies and disasters.
- 7.3. Restructuring may be required of sub-national governance institutions. Decentralized authorities can be more efficient than centralized, especially in urban areas (SDG11), but such institutions need political support, authority, capacity and adequate resources to allow them to be capable, effective, accountable and transparent.
- 7.4. Develop land-based finance measures to ensure that land serves social, economic and fiscal functions in a region where property taxes currently represent less than one percent of GDP.
- 7.5. Encourage greater public awareness of land and environmental issues, and promote greater civic engagement and participation, with public access to environmental information gathered by public bodies.
- 7.6. Support women's rights, which often exist in national laws and constitutions but less in social practice. One approach could be a tax on male beneficiaries when women renounce their inheritance rights to property; this would help reduce the gender gap, with the money collected used to fund initiatives for women's empowerment,
- 7.7. Develop appropriate land-related courses at higher education and training institutions in co-operation with other institutions locally and regionally.
- 7.8. Develop alternative land dispute resolution mechanisms, combined with effective enforcement and specialist environmental and planning courts or tribunals.

To conclude, as the recent World Bank research report on land in the MENA region recognized, conditions in many of its countries are deteriorating from multiple causes: population growth, conflict and unrest, natural and man-made disasters, climate change, water shortages, temperature rise and extreme weather events. These are threatening progress towards the SDGs, and governments are struggling to ensure that land is best used to serve social, economic and fiscal functions. Increasing land scarcity requires strategic

trade-offs about the best use of land to meet competing policy objectives, and a holistic or 'joined-up' approach is needed to provide land governance and policies that can address the core development issues for the region. As referred to previously, much guidance is now available from international institutions on land governance priorities and approaches, and the necessary supporting geo-spatial technology, which is rapidly becoming better, cheaper and easier to use. The academic community in the MENA region has been slow to respond, and now needs to formulate new interdisciplinary approaches and partnerships to develop and manage new knowledge to meet the challenges ahead.