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Land Administration and its Role for Reaching Food Safety and Peacebuilding in Syria

Towards a New Paradigm for Sustainable Development in Rural and Urban areas

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Executive summary

The conflict in Syria has entered its tenth year with no political solution in sight. The Syrian crisis is considered as one of the largest and most destructive contemporary humanitarian crises in the world with triple crises: **conflict, climate change and covid-19 pandemic**. The conflict has left very large economic and social damages, destroyed infrastructure and a sharp contraction in the national economy and created the largest humanitarian refugee crisis in the modern world. According to Filippo Grandi, the UN-High Commissioner for Refugees *“Syria is the biggest humanitarian and refugee crisis of our time, a continuing cause of suffering for millions which should be garnering a groundswell of support around the world”* (UNHCR, 2021). According to the United Nations, more than 6 million Syrians have been displaced within the country, while more than 5,6 million people have fled Syria as refugees since 2011, seeking safety in other countries, especially Lebanon, Turkey, Jordan and beyond (UNHCR, 2021). It is estimated that the conflict has claimed over 400,000 lives since 2011 (Human Rights Watch, 2021). About 2 million wounded, a large percentage of them disabled (each dead corresponds to 5 wounded). An estimated 11 million people need humanitarian assistance and more than half of the population remains displaced from their homes - including 5.5 million refugees living in neighboring countries and another 6 million internally displaced inside Syria. Women and children comprise more than half of those displaced (USA for UNHCR, 2021).

All most of Syrian population and lands have been affected by the conflict, and the results have been tragic. National lands witnessed successive stages of fragmentation, division, and reunification between the State and the other parties of the conflict. Many areas have gone out of state control since the start of the conflict in 2012, the territories under the control of the Syrian government have dropped from 40 per cent to 15 per cent of the total land in the country (UN-ESCWA, 2020, p.16). The conflict has led to the destruction and weakening of the economic and social infrastructure and strongly impacted people life's and safety in all dimensions. It is estimated that the national poverty rate exceeded 80 per cent in 2020 (UN-ESCWA, 2020, p.16).

Adding to conflict tragedy, a historic drought may have created the conditions for Syria's civil war and contributed since early stages before the conflict in food insecurity, stemming from land mismanagement as an important factor driving to food insecurity. Therefore, Syria is in the grip of a severe economic crisis, which exacerbates food insecurity and poverty status. Rising food and fuel prices and depreciating informal exchange rates make it more difficult for families to meet their basic needs. Over the last six months, 1,4 million Syrians become food insecure added to the 9,3 million Syrian in the last ten years; this rapid increase has resulted mainly due to the COVID-19 lockdown measures and the freefall of Lebanese economy (WFP, 2020). These events led to skyrocketing food prices to increase by more than 200 per cent in less than a year. Now, the basic food basket cost 76,000 Syrian Pounds (20 times higher than pre-crisis cost). Syrian households were forced to adapt cruel measures ranged from cutting meals to selling assets to cope with this catastrophe. However, they *“have already been through more they can handle; they have exhausted their saving and often fled their homes and now face a downward spiral into poverty and hunger”* Corinne Fleischer, the WFP Country Director in Syria, said (WFP, 2020).

Studies and reports point to land management, land tenure, and land rights as essential issues for assuring food security (G. ROCKSON, 2012). So, considering the current crisis in Syria with the focus on the relief operations, steps that address land governance issues must also be considered in any response. It affects the effectiveness and longevity of humanitarian action and long-term recovery (NRC, 2016). Land Administration and property issues are increasingly creating challenges for the immediate operational work of humanitarian actors and recovery action of a post-agreement Syria. With recognizing economic and social crises and the urgent humanitarian needs, land governance is a central entry point for addressing food security in urban and rural areas. Addressing land administration, urbanization, planning, and urban development control and strengthening local development will contribute to restoring and strengthening the rule of law, will ensure more equitable and sustainable response, and will ultimately protect, support and strengthen the safety, food safety, social cohesion, and resilience of those affected by the crisis.

The food insecurity is considered relatively a new issue in Syria, because the country has known by food self-sufficiency policy before the conflict. Syria enjoyed a high levels of food availability but suffered from poor use and sustainability and irregular regional disparities (SCPR, 2019, p. 70). Today, food insecurity becomes one of the most pressing and crucial issues in Syria, because the current trends of poverty, lack of food and agriculture production indicate a severe hunger crisis. The correlation between land degradation, climate change and Covid-19 and food insecurity become a real challenge in Syria.

At urban scale, Syria has witnessed an acceleration movement of urban development. The percentage of people who live in urban areas has increased from 51,9 per cent in 2000 to 55,5 per cent in 2020, and it will be increased to 61,7 percent by 2030 (UN-DESA, 2018). Already, the percentage of urbanization was reached 76 per cent in certain cities as Aleppo, Lattakia, Tartous and other cities in rural Damascus because 40 per cent of 3,2 million of Internal Displaced Persons are being hosted in those cities. A big component of urban infrastructure has been destroyed, around 35 per cent of urban schools are not operating due to damage or to occupation. More than 50 per cent of hospitals in cities are not operational. Around 760,000 housing units in Syrian cities were damaged. Historic and traditional urban centers were massively destroyed in Aleppo, Homs, Deir ez-Zor, Dara'a, Douma, and Daraya (UN-HABITAT, 2021).

The analysis related to Land administration & Planning systems in Syria show:

- The multiplicity of authorities in Syria and the absence of a clear strategy for land Administration (Use, Tenure & Development).
- Duplication of works and lack of coordination and correlation.
- Absence of Land Administration System, tools and policies in Syria.
- Lack and weakness of human and institutional capacities.
- There is no any indication of public participation in land planning or development.

On the other hand, public administrative records and management systems related to housing, land and property face today a huge challenge characterized by loss, damage or destruction, of property and the difficulty to manage the land because of conflicts over

tenure rights or absence of owners as there is only 5,582,968 refugees registered on Syria Regional Refugee Response in the 23th of December 2020 (UNHCR, 2020).

The analysis of spatial, legal and institutional frameworks shows that there are many challenges need to be resolved, therefore a new paradigm has been developed with many priority actions and outputs. Three main goal outcomes proposed consequently:

- **Goals/Outcome1:** National program for urban/rural agriculture implemented and Public participation enhanced.
- **Goals/Outcome2:** Tenure systems and laws reformed.
- **Goals/Outcome3:** Institutional capacity development strengthened.

A priority Actions/outputs proposed according to the above goals to assure spatial, legal and institutional goals according to Framework for Effective Land Administration (FELA) concept, but it included more a practical approach based on Green Cities and assure food security. So the main output for this paradigm based on:

- Integrated Land Planning Urban/Rural- Green cities and urban agriculture.
- Land Investment.
- Implementation and monitoring.
- Land Administration Assessment.

The Effective and Efficient Land Administration System Main Outcomes are:

- Green, healthy cities and people.
- More jobs for women and youth.
- Affordable food prices for people.
- Decent income for People and families.
- Closely connected urban and rural areas.
- Reduce transport cost and energy.
- Assure innovation & Food Security.

Syria loses more than 30 years of development and that will have so long-term effects on future generations. The full integration and engagement of all stakeholders is essential for successful implementation of land administration system. The efficacy and effective capacity development is crucial for successful implantation of Land Administration System. The public participation is the key for successful and effective land administration implementation. Peacebuilding in Syria, need and request the cooperation of all local, national, regional and international efforts to ensure prosperity and wellbeing for all.

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Abbreviations

FELA	Framework for Effective Land Administration
GDCA	General Directorate Cadastral Affairs
GLTN	Global Land Tool Network
IDPs	Internal Displaced Persons
LA	Land Administration
LGU	Local Government Unit
MLAE	Ministry of Local Administration and the Environment
NFRP	National Framework for Regional Planning
RPC	Regional Planning Commission
SDGs	Sustainable Development Goals
UN-DESA	United Nations Department of Economic and Social Affairs
UN-HABITAT	United Nations Human Settlements Programme
UNHCR	United Nations High Commissioner for Refugees
WHO	World Health Organization

1. Background and Context

The conflict in Syria has entered its tenth year with no political solution in sight. The Syrian crisis is considered as one of the largest and most destructive contemporary humanitarian crises in the world with triple crises: **conflict, climate change and covid-19 pandemic**. The conflict has left very large economic and social damages, destroyed infrastructure and a sharp contraction in the national economy and created the largest humanitarian refugee crisis in the modern world. According to Filippo Grandi, the UN-High Commissioner for Refugees *“Syria is the biggest humanitarian and refugee crisis of our time, a continuing cause of suffering for millions which should be garnering a groundswell of support around the world”* (UNHCR, 2021). More than 6 million Syrians have been displaced within the country, while more than 5,6 million people have fled Syria as refugees since 2011, seeking safety in other countries, especially Lebanon, Turkey, Jordan and beyond (UNHCR, 2021). It is estimated that the conflict has claimed over 400,000 lives since 2011 (Human Rights Watch, 2021]. About 2 million wounded, a large percentage of them disabled (each dead corresponds to 5 wounded). An estimated 11 million people need humanitarian assistance and more than half of the population remains displaced from their homes - including 5,5 million refugees living in neighboring countries and another 6 million internally displaced inside Syria. Women and children comprise more than half of those displaced (USA for UNHCR, 2021).

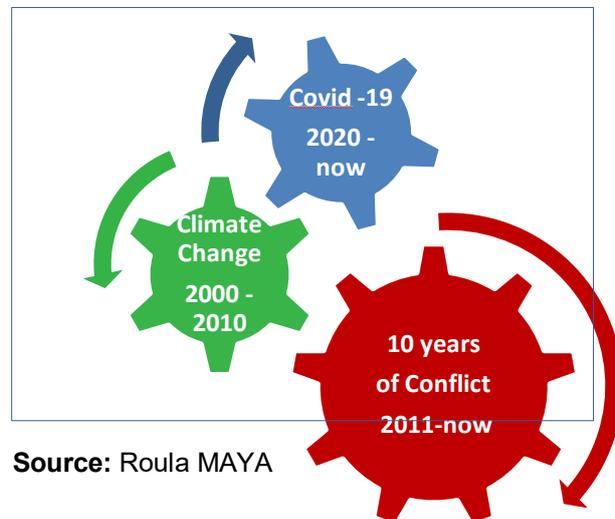
All most of Syrian population and lands have been affected by the conflict, and the results have been tragic. National lands witnessed successive stages of fragmentation, division, and reunification between the State and the other parties of the conflict. Many areas have gone out of state control since the start of the conflict in 2011, the territories under the control of the Syrian government have dropped from 40 per cent to 15 per cent of the total land in the country (UN-ESCWA, 2020, p.16). The conflict has led to the destruction and weakening of the economic and social infrastructure and strongly impacted people life's and safety in all dimensions. It is estimated that the national poverty rate exceeded 80 per cent in 2020 (UN-ESCWA, 2020, p.16).

Adding to conflict tragedy, a historic drought may have created the conditions for Syria's conflict and contributed since early stages before in food insecurity, stemming from land mismanagement as an important factor driving to food insecurity. Therefore, Syria is in the grip of a severe economic crisis, which exacerbates food insecurity and poverty status. Furthermore, Syria was not immune to COVID-19 epidemic. The number of COVID-19 cases continues to rise in Syria and the total infections is 14,724 confirmed cases and 968 deaths (WHO, 12 February 2021). OCHA Syria, announced that the official numbers about Covid-19 stay relatively low, but it is clear that the epidemiology is rapidly widespread and affected a lot of people in Syria. (OCHA Syria, February 2021). The COVID-19 lockdown measures and the freefall of Lebanese economy have raised food and fuel prices and depreciating informal exchange rates, and made it more difficult for families to meet their basic needs. Over the last six months, 1,4 million Syrians become food insecure added to the 9,3 million Syrian in the last ten years (WFP, 2020).

Face above triple crises, food insecurity becomes today one of the most pressing and crucial issues in Syria, because the current trends of poverty, luck of food and degradation of agriculture production indicate a severe hunger crisis. The

correlation between conflict, land degradation, climate change and Covid-19 and food insecurity become very strong and real challenge and a real opportunity at the same time for stop the conflict and starting peacebuilding in Syria.

Figure 1: Syria is facing a triple crisis during 20 years.



2. Methodology

Studies point to land management, land tenure, and land rights as an essential issue for assuring food security (G. ROCKSON, 2012). So, considering the current crisis in Syria with the focus on the relief operations, steps that address land governance issues must also be considered in any response. It affects the effectiveness and longevity of humanitarian action and long-term recovery (NRC, 2016). Land Administration and property issues are increasingly creating challenges for the immediate operational work of humanitarian actors and recovery action of a post-agreement Syria. With recognizing economic and social crises and the urgent humanitarian needs, land administration is a central entry point for addressing food security in urban and rural areas. Addressing land administration, urbanization, planning, urban development control and strengthening local development, will contribute to restoring and strengthening the rule of law, will ensure a more equitable and sustainable response, will support safety, food security, social cohesion, and resilience of those affected by the crisis. The research aims to answer the following questions:

- what are the main challenges for peacebuilding in Syria?
- what are the economic and social impacts of conflict, climate change and Covid-19?
- Is there a Land Administration mechanism in Syria?
- How land administration can assure the food security and the well-being for people in Syria?
- How land use policies and urban development control reduce informal settlement and contribute to achieving sustainable balanced development between rural and urban areas?
- How can local development policies in rural and urban areas contributed the complementarity between rural and urban centers to assure food security and well-being?

Understanding land administration mechanism in Syria (Policy, Tenure, Use), is the crucial to prepare a new paradigm for Land Administration to assure food security and achieving

SDGs in rural and urban areas based essentially on local development. The Micro and Macro large-scale urban agriculture is not new in itself; it has been witnessed in many major cities such as Montreal, Shanghai, and most recently in Paris, where the largest urban farm in Europe opened this year within area of 14,000 m² (Le monde, 2019). Today, the concept shows many advantages linked to the global pandemic COVID-19. The idea is to foster environmental and economic resilience for tomorrow's Syrian urban and rural areas by a new paradigm based on Agropolis approach as it is seen in garden cities. Therefore, this paper has based on mixed research methods:

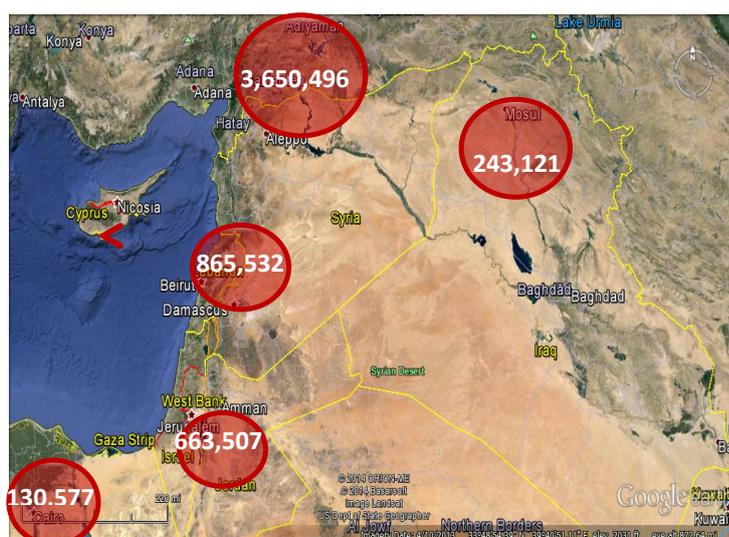
- Desk Review: has been done through the scientific journals, international reports and researches related to land administration and food security for urban and rural development.
- Situation Analysis: A profound Analysis has been implemented for the state of Land Administration in Syria (spatial, legal and institutional), the impact of crisis in order to identify the key challenges for Land administration in Syria and key actions and main outputs.
- Stakeholders analysis for land management in Syria; responsibility and roles.
- Benchmarking/ evaluative approach: based on international studies to highlight Land use systems adopted by United Nations Committee.
- Perspective Approach: Propose a new paradigm for Sustainable Land Management to assure the food security, safety, social cohesion, and resilience for Syrian people.

3. Situation analysis, Syria faces triple crisis

A. Ten years of Conflict from 2011- now

The conflict in Syria has entered its tenth year with no political solution in sight. The Syrian crisis is considered as one of the largest and most destructive contemporary humanitarian crises in the world. The conflict has left very large economic and social damages, destroyed infrastructure and a sharp contraction in the national economy and created the largest humanitarian refugee crisis in the modern world. More than 6 million Syrians have been displaced within the country, while more than 5,6 million people have fled Syria as refugees since 2011, seeking safety in other countries, especially Lebanon, Turkey, Jordan and beyond (UNHCR, 2021). It is estimated that the conflict has claimed over 400,000 lives since 2011 (Human Rights Watch, Feb. 2021). About 2 million wounded, a large percentage of them disabled (each dead corresponds to 5 wounded). An estimated 11 million people need humanitarian assistance and more than half of the population remains displaced from their homes - including 5,5 million refugees living in neighboring countries and another 6 million internally displaced inside Syria and more than half of them are women and children (USA for UNHCR, 2021).

Figure 2: The number of Syrian refugees in neighboring countries on 17 February, 2021.



Source: R. MAYA based on the data of UNHCR 2021, and satellite images Google earth 2014.

Lands witnessed successive stages of fragmentation, division, and reunification between the State and the other parties of the conflict. Many areas have gone out of State control since the start of the conflict in 2012, the lands under the control of the Syrian government have dropped from 40 per cent to 15 per cent of the total land in the country (UN-ESCWA, 2020, p.16). The conflict has led to the destruction and weakening of the economic and social infrastructure and strongly impacted people life's and safety in all dimensions. It is estimated that the national poverty rate exceeded 80 per cent in 2020 (UN-ESCWA, 2020, p.16).

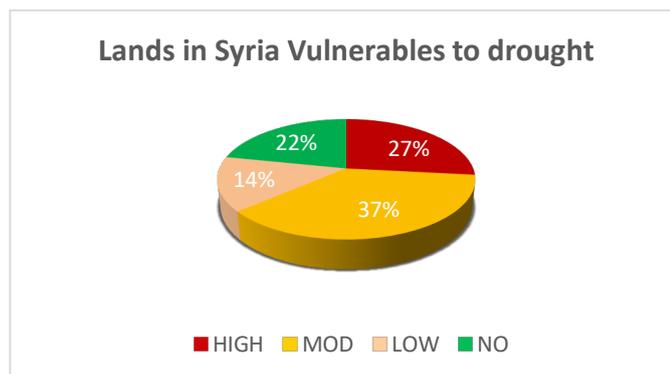
The conflict impacted strongly the main production factors, the agricultural GDP in Syria decreased by 50 per cent, in comparison with 2010. The agricultural production witnessed a severe destruction of human, institutional, physical and environmental factors. Agriculture contributed about 16 per cent of the Syrian economy until 2010; it was able to attract 14 per cent of the labor force in Syria, and this percentage decreased to 9,5 percent in 2014, and then increased to 12 per cent in 2018 due to improvement of security and population retour to their lands in certain regions. The cereal production decreased by 8 per cent during the years 2011-2015, and then witnessed an improvement and an average growth of 0.1 percent during the years 2015-2019 after the return of security and stability to some areas of grain production, enabling farmers to access their lands and cultivate them and provide production requirements (PICC, 2020, p.670. The deficit remains with the northern and eastern regions which still outside the control of the Syrian State, in which grain production accounts for more than 70 per cent of the grain production in the country, which aggravates the problem of food insecurity in Syria and the hunger of the population.

B. Climate Change and waves of drought from 2000 -2010

Even before the conflict, ACSAD was announced since 2009 the regional early warning for desertification and declared that 68 percent of lands in Syria are susceptible to

desertification (ACSAD, 2011, p. 29). The waves of drought which faced Syria between 2000- 2010 increasing desertification and that was related to many factors such as climate change and human factors which lead to degradation of Flora and Fauna species and human communities. The agriculture sector employed 40 per cent of Syria’s workforce and accounted for 25 per cent of gross domestic product before the crisis in 2011, has been impacted gravely. The farmers are affected by poor and erratic rainfall since October 2007, which has caused the worst drought to strike Syria in four decades. Around one million people are severely affected and food insecure, particularly in the Middle north, Southwestern and North-eastern governorate of Al Hassakeh, home to Syria’s most vulnerable, agriculture-dependent families (ACSAD, 2009, p.26). The drought forced thousands of farming families to leave their lands and homes and to move to cities for searching alternative work after two years of drought between 2007-2009 after several unproductive years. The field survey conducted in 2011 showed that *“most of the houses on villages are left empty and less than 10 percent are occupied by old people and children. The younger generations left for thousands of kilometers seeking work. Many young men left for Lebanon or Jordon as workers in sectors of construction or agriculture. Women left to work in the western part of the country, for packing vegetables in “Tartous” green houses. From the Social point of view families’ member were separated, and divorce, second marriages and economical and sexual up-used have been increased among them”* (ACSAD, 2009, p.29). Therefore, the social and economic context was already complicated, the displacement of people started before the conflict, the climate change and the drought have a great impact on people’s lives in many regions and that was one of the causes which facilitates this conflict. The government response was very limited, around 60 thousand families forced to leave the eastern regions in Syria to flee to Rural Damascus and Daraa in south of Syria (SCPR, 2019).

Figure 3: Lands in Syria Vulnerable to drought.



Source: R. MAYA based on (ACSAD, 2009, p. 14).

Therefore, in the pre-war period, Land use in Syria was affected by climate change, the successive drought, population pressures accompanying which have produced non balanced use of natural resources and have led to continuing degradation of lands and caused a waves of population displacement from some areas to major cities such as Damascus and Aleppo. The rate of drought and desertification reached its peak in 2014 at 75 per cent due to the lack of rain and its decline to record levels, then stabilized at 59 per cent during the years 2016-2019. The process of soil degradation, which includes

desertification, salinization, and pollution, is one of the important problems in Syria arising from the unfair activities of land use and excessive use of water resources.

C. Covide-19 epidemic 2020 - now

According to OCHA Syria, 14,048 of COVID-19 cases is reported by the Ministry of Health include 921 fatalities and 7,561 recovered. The official numbers stay relatively low, but it is clear that the epidemiology gas rapidly widespread and affected a lot of people in Syria (OCHA Syria, February, 2021). A severe rises recorded in the medical system, also in the schools with 2,124 cases have been recorded in January 2021. Of those affected were 1,263 teachers/administrative staff, have included death of 11 teachers and three school doctors. These cases also highlight the challenges of preventing transmission in schools, particularly given the overall context of overcrowded classrooms, shortfalls in teachers, and poor/damaged infrastructure (OCHA Syria, February 2021).

On 12 of March 2020, the Syrian government, like other countries, began applying precautionary measures to confront the risk of the spread of the Covid-19, and stopped main economic activities such as industrial, commercial, educational, government administration and judicial services, except for what is necessary to secure the basic needs of the population. Of course, this global closedown has impacted strongly the economic growth and social life in Syria and accelerated the deterioration of the quality of people's life which is already weak and fragile. The application of the policy of temporary closure of transport, services and travel activities led to the stoppage of workers' work and the cessation of income resulting from these activities, and temporary unemployment appeared, especially that the bulk of the workforce in these sectors is unprotected employment and not covered by the social protection system, which led to the depletion of these The category for its own savings for consumption and subsistence.

4. Social, economic and spatial impacts of conflict, climate change and Covid-19

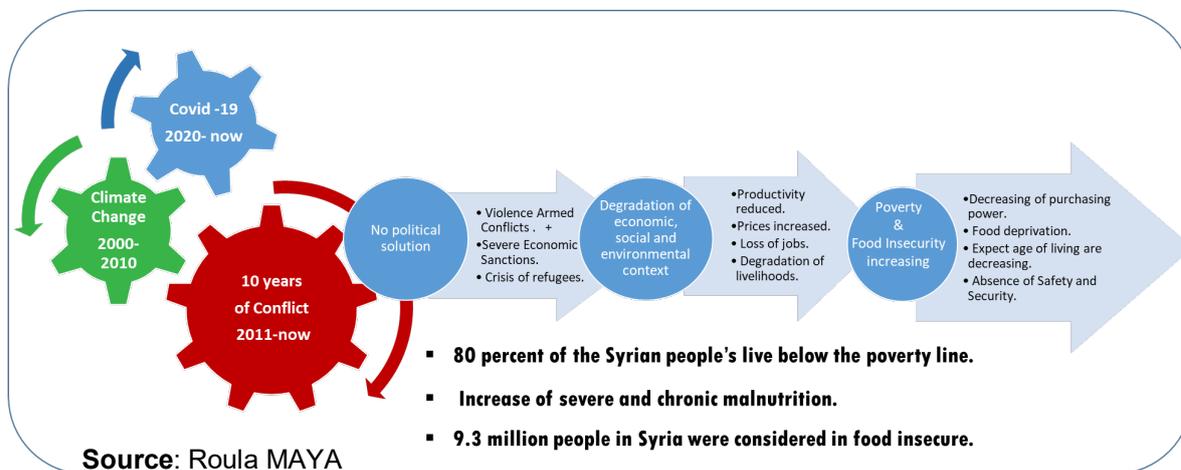
A. Syria is at the head of food insecurity map

More than ten years of conflict and 10 years of drought before and recently Covid-19 pandemic have led to accumulated natural human, material and institutional losses and where those roots causes have led Syria to suffering from severe food insecurity accumulated in ten years and the situation become not acceptable in the beginning of 2021 in its four dimensions: food availability, food access, utilization and stability.

According to WFP, as of April 2020, more than 9,3 million people in Syria were considered food insecure, with one million severely food insecure. In January, WFP reported 85 per cent of surveyed households reported at least one food-based coping strategy, and four out of five households reported already depleting their savings due to the worsening economic situation across the country. According to a WFP report on the socio-economic impacts of Covid-19, current projections indicate a likely further deterioration of the food security situation in the coming months, with possible longerterm, entrenched consequences, including the likely increase of acute and chronic malnutrition. For people

living in Syria, the actual socio-economic situation represents the most challenging humanitarian conditions experienced in the past ten years of crisis. While estimates one year ago suggested at least 80 per cent of the population lived below the poverty line, current conditions indicate it is likely more families have been pushed toward poverty and destitution.

Figure 4: Impact of triple crisis on food security.



The food insecurity is considered relatively a new issue in Syria, because Syria has known by food self-sufficiency policy during the last three decades before the conflict. The country enjoyed high levels of food availability but suffered from poor use and sustainability and irregular regional disparities (SCPR, 2019, p. 70). However, the food insecurity issue it is not new for international community. Since 1970 s, the World Food Conference defined food security in terms of food supply assuring the availability and price stability of basic foodstuffs at national and international level. Many other concepts are coming later, but the more widely accepted definition was proposed in 1996 by World Food Summit in multidimensional concept “*Food security exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for and active and health life*” (World Food Summit, 1996). This definition provides the bases and options for policy responses based on recovery and livelihood action according to four dimensions: food availability, food access, utilization and stability which became not possible for the majority of Syrian people.

The Food security is a human right and an ethical issue recognized since 1948 by UN in the universal declaration of Human Rights which mentioned clearly in the article 25 “*Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control*” (UN, 1948). This triple crisis in Syria are prevent Syrian people from their first rights. The food prices, in addition to other factors such as periodic shortages of staples, has led to a significant deterioration in food insecurity indicators. According to WFP, as of April 2020, 9,3 million people in Syria were considered food insecure, with one million severely food insecure and that request immediate and urgent responses from national and international community.

B. Urbanization & Land degradation in Syria

Lands is one of the most important resources which has Syria, the loss and degradation of lands was taking place with unprecedented rates. The land use balance is totally changed in Syria since 2011 by urbanization and economic growth before the war, or by severe shocks as socio-economic, environmental, and political changes, or also armed conflicts. The total area of land in Syria is 18,5 million hectares, and it is distributed as follows: 33 per cent of arable lands, 20 per cent of non-arable lands that include buildings and facilities, 3 per cent of forest, and 44 per cent of meadow. In the first three years of the Syrian war, more than 70 per cent of the country's area fell out of state control, and armed factions classified as terrorists took control of the countryside, the Syrian Jazira region. A reality that Damascus has almost completely lost its agricultural resources, and the farmers have lost the most important points of support for their continued existence in their lands. The agricultural lands total area reached between 4-4,5 million hectares and the percentage of cultivated land was 28 per cent in 2011 before the crises, then it decreased to 23 per cent in 2019 relating the continuous conflict in different regions, the continues migration of population inside and outside Syria (PICC, 2020, p. 67).

The vegetation cover areas decreased by 0,26 per cent in 2015 from 2010. This is due to the suspension of development projects. The access to those areas was subjected to sabotage due to armed terrorist groups and military actions, in addition to the lack of access to funding. During 2016, the density of vegetation cover became 2,5 per cent below the normal range which was before the war (PICC, 2020, p.67). The rate of desertification increased from 59 per cent to 74,6 per cent between 2010 and 2014, and this increase is due to the inability to develop and implement management integrated disaster risks, climate and soil pollution with oil and its derivatives during the war, especially because of random refining (PICC, 2020, p.67).

Figure 5: Land use in Syria in 2011.

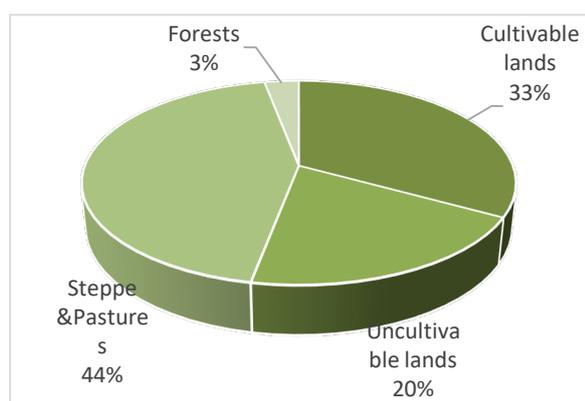
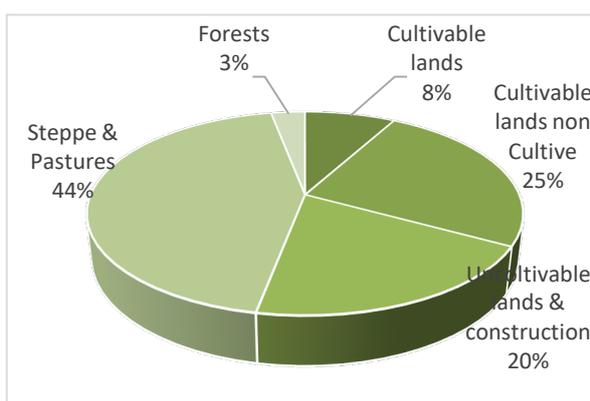


Figure 6: Land use in Syria in 2019.



Source: R. MAYA based on (PICC, 2020, p.67).

The cultivated land was converted to non-cultivated land-use types in many areas in Syria. Generally, cultivated areas declined by 943 hectares per year between 2010 and 2018 (Mohamed, M.A.; Anders, J.; Schneider, C, 2020. p.67).

The studies show that there is a clear change in areas and percentages of land use balance in Syria between 2000-2015. The forests areas decreased by 8,04 per cent between 2000-

2015. The percentage of change concerning urban & artificial area land was enormous and noted 50,10 per cent. Furthermore, the percentage of change concerning agriculture lands and pastures were negative and that means that the urban development was on agricultural lands and forests during 2000-2015 especially Syria was known by accelerated urbanization rates significantly, and the percentage of the urban population increased from 43.5 per cent of the total population in the seventies to 49,8 per cent in the nineties of 20 century to reach 53,5 per cent in 2006, and then to 54 per cent in 2008 (R. MAYA, 2010, p.278). Those indicators show un form of non-balanced development, the acceleration of urban development and the degradation of agriculture sector, the non-balanced development between urban and rural areas, the migration of population from rural to urban areas looking for a new work and better urban services in the main cities. Prior to the crisis, over half of Syria's population lived in urban and peri-urban areas, and approximately one-third of the urban population lived in informal settlements, between forty and fifty percent of the population lived in informal settlements. These settlements had services such as electricity and running water, but had only limited official recognition and registration. The informal status of these settlements usually resulted from the lack of adherence to official regulations regarding land tenure and registration requirements, and/or land use, planning, and building requirements. Most residents of informal settlements lacked security of tenure.

At urban scale, syria has witnessed an acceleration movement of urban development. The percentage of people who live in urban areas has increased from 51,9 per cent in 2000 to 55,5 per cent in 2020, and it will be increase to 61,7 per cent by 2030. The percentage of urbanization was reached 76 per cent in certain cities as Aleppo, Lattakia, Tartous and other cities in rural Damascus because 40 per cent of 3,2 million of IDPs are being hosted in those cities. A big component of urban infrastructure has been destroyed, around 35 per cent of urban schools are not operating due to damage or to occupation. More than 50 per cent of hospitals in cities are not operational. Around 760,000 housing units in Syrian cities were damaged. Historic and traditional urban centres were massively destroyed in Aleppo, Homs, Deir ez-Zor, Dara'a, Douma, and Daraya (UN-HABITAT, 2021).

Figure 7: Percentage of population in urban and rural areas in Syria.

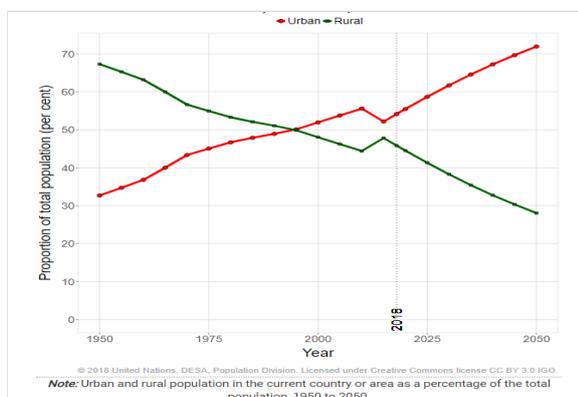
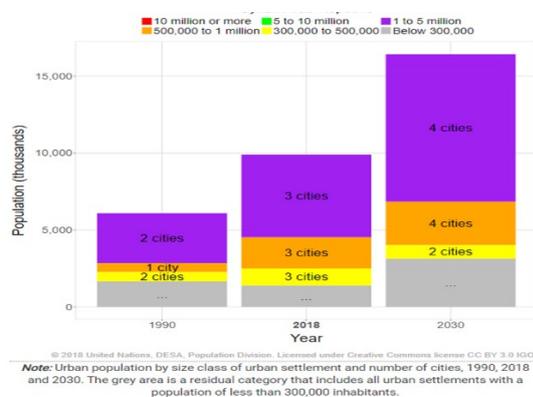


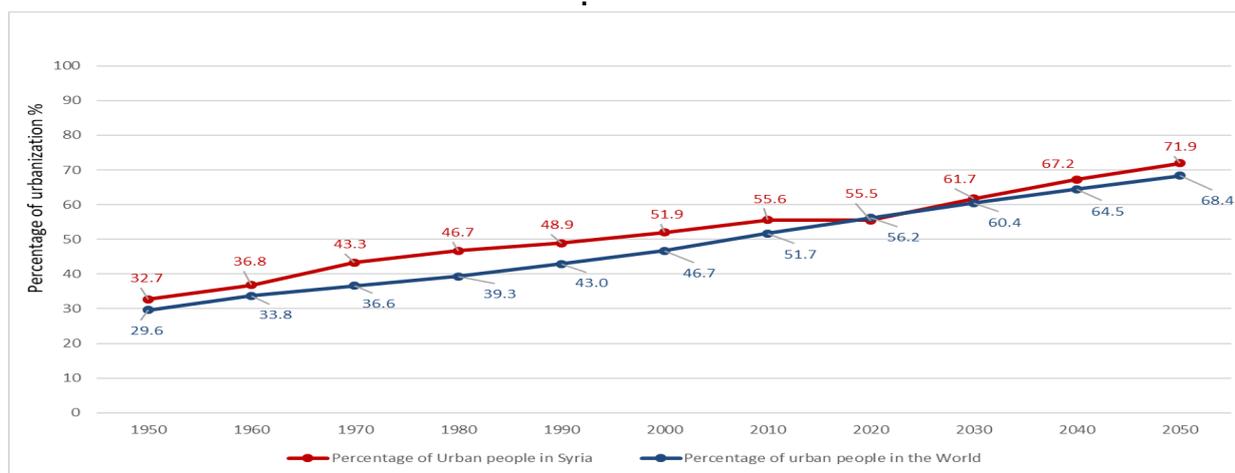
Figure 8: Urban Population by size class of urban settlement in Syria.



Source: R. MAYA, based on Data of UN-DESA, *Population dynamics, World Urbanization Prospects 2018*. <https://population.un.org/wup/Country-Profiles/>

The number of residential Master Plans in the governorates decreased from 164 in 2010 to in 2019. This significant decrease is indicating that the urban planning has been greatly affected during the current crisis. The industrial and industrial plans also decreased from 25 plan in 2025 to 12 in 2019. Also, the number of new urban agglomerations were dropped from 12 plan in 2010 to 1 plan in 2016, and then increasing between 2018-2019 to reach 2 plans with 5,2 hectares. The implementing of these plans remains impossible due to the blockade and sanctions imposed on Syria since 2011 which impacted the development and the peoples live and increase the poverty and food insecurity as main outcome.

Figure 9: Trends of Urbanization in Syria & World in 100 years.



Source: R. MAYA, based on Data of UN-DESA, *Population dynamics, World Urbanization Prospects 2018*.
<https://population.un.org/wup/Country-Profiles/>

5. Land Administration: A key tool for Reaching Food Safety and Peacebuilding in Syria

A. Pathways for effective land administration

Land administration is a multidisciplinary and integrated tool that includes technical, legal, managerial, political, economic and institutional dimensions. Land always represented a crucial part in the life of humanity. It *“plays a vital role in the breeding and survival strategies of many living species. The history of human settlement has been dominated by national and international conflicts-men and women may kill or may be killed in fights over the boundaries of their nations or of their individual properties”* (UNECE, 1996, p.10). Consequently, good management of the land is essential for present and future generations for reaching peacebuilding and sustainable development.

The Land Administration (LA) term was first coined by the United Nations Economic Commission for Europe (UNECE) in 1993. The UNECE defines Land Administration as *“the process of recording and disseminating information about ownership, value and use of land and its associated resources”*. These *“processes include the determination (..) ‘adjudication’ of rights and other attributes of the land, the surveying and description of these, their detailed documentation, and the provision of relevant information in support of land markets”* (UNECE, 1996, p.14).

The notion of land administration is not limited to land only, it exceeds it to people and their relation to land. Land is somewhat more than which people or communities have rights of ownership and use, that can be bought and sold and be subject to tax, and that is the basis of economic production. It paves the way toward meeting the challenges that land administration systems face to ensure the vision of economic development, social justice, environmental protection, and good governance (Williamson et al., 2010).

Furthermore, the land symbolizes the security element to people, and land administration came to regulate and satisfy the human needs in reaching this type of security. The informal land administration system can be considered as the most common systems used among all countries. Environmental changes, population growth, crisis, and wars (and what follows it from distraction, displacement, and informal settlement), and many other factors have always formed a threatening factor to these informal systems.

The approach proposed by (UN-HABITAT/Kadaster/GLTN, 2016) for Land Administration based on three fundamental principles of the interrelated core components (Table 1). According to the three key principles, each country must deal with the management of land should work with four scopes of land tenure, land value, land use, and land development. These four land administration functions are different in their professional focus and should be undertaken by a mix of professions including surveyors, engineers, lawyers, valuers, land economists, planners, and developers (Enemark, 2009).

Table 2: The key principles of the Fit-For-Purpose approach.

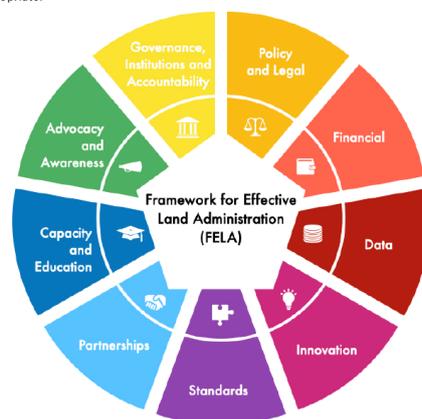
Key Principles		
Spatial framework	Legal framework	The institutional framework
<ul style="list-style-type: none"> - Visible (physical) boundaries rather than fixed boundaries. - Aerial/satellite imagery rather than field surveys. - Accuracy related to purpose rather than technical standards. - Demands for updating and opportunities for upgrading and ongoing improvement. 	<ul style="list-style-type: none"> - A flexible framework designed along administrative rather than judicial lines. - A continuum of tenure rather than just individual ownership. - Flexible recordation rather than only registers. - Ensuring gender equality for land and property rights. 	<ul style="list-style-type: none"> - Good land governance rather than bureaucratic barriers. - Integrated institutional framework rather than sectorial silos. - Flexible ICT approach rather than high-end technology solutions.

Source : UN-HABITAT/Kadaster/GLTN, 2016.

The most recent concept related to LA is the Framework for Effective Land Administration (FELA) was proposed by the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) in May 2020. This framework confirmed the need for effective land administration by considering that a large proportion of humanity do not enjoy recorded land and property rights, there is a need to accelerate efforts to document, record and recognize people to land relationships in all their forms and cut directly and indirectly across all the SDGs. The integrated nature of the 2030 Agenda for Sustainable Development and its 5Ps (People, Planet, Prosperity, Peace and Partnership). This Framework for effective Land Management shows that “*Effective land administration supports poverty eradication, food security, and can support ensuring dignity and equality through documenting, recording and recognizing people to land relationships in all forms,*

notwithstanding the potential to undermine dignity when the information is misused” [UN-GGIM, May 2020, P: 18]. This framework for effective land administrations realized through integrated geospatial information, for land policies, land tenure, land value, land use, and land development. Based on this framework an institutional and stakeholder’s analyses has been prepared to identify the land administration mechanism in Syria.

Figure 10: Nine Pathways of the Framework for Effective Land Administration.



Source: United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM), May 2020, p.18

B. The institutional, spatial frameworks & land use stakeholders

The land use is a multidisciplinary and multi-levels approach at spatial (national, regional, local), sectoral (economic, social, and environmental). Therefore, the land administration needs today more integrated approaches to manage spatial development and that consider the wide range of policies that affect land use beyond the planning system. Housing, transportation, energy, water, agriculture, tourism, and economic development make demands on land and affect how it is used. This presents a complex governance challenge among sectors at sectoral level and spatial levels: national, regional, and local see (annex 1) and (table 2) to understand Land administration stakeholders and their roles.

Table 2: Land Administration in Syria, main stakeholders and roles.

Role	Land Tenure	Land Rights	Land Value	Land Use	Land Development
Ministry of Local Administration and Environment.	X		X	X	X
The Ministry of Agriculture and Agrarian Reform.				X	X
Ministry of Water Resources				X	
Ministry of Public Works and Housing				X	X
Ministry of Social Affairs and Labor *		X			
Ministry of industry				X	X
Ministry of transport				X	X
International Planning and Cooperation Authority				X	X
Regional Planning Commission				X	X

Ministry of Finance			X		
Ministry of Tourism				X	X
Ministry of Justice		X			
Ministry of Communication & Information	X	X	X		X

Source: Roula MAYA

* Gender equity rights access to priority, heritage.

The National Planning is related to land use and land development policies via national plan for social and economic development. The main role for Land administration in urban areas is related to Ministry of Local Administration. The agriculture land planning is related to Ministry of agriculture and agrarian reform. The Land reform mission is related to the ministry of water resources. The regional planning Commission is related to the Ministry of public work and housing. To understand the planning mechanism in Syria, we should understand the role of each entity and how is working on land administration.

The role of Ministry of Local Administration and the Environment (MLAE)

The MLAE is charged of Urban Planning and Master Plans. The General Directorate Cadastral Affairs (GDCA) is considered the technical arm for MLAE and one of the oldest service institutions operating in Syria. The cadastral registry was established in the mid-twenties of the 20 century under the French mandate in Syria, considering that the method of registering rights to lands, which was known as “Daftar Khanum” is fundamentally insufficient, because it is not based on adequately identifying real estate, in addition to the fact that the designated area is not controlled and estimated by the concerned parties, and that the recordings of the “Daftar Khanum” and the bonds given are not placed on a clear legal basis, and this deficiency does not guarantee the safety of rights in real estate transactions. The real estate registry and its complementary documents are considered as an important national value for preserving and developing the property rights. It is considered a duty required by the national sovereignty of the state, to protect social stability and promote economic development.

The Cadastral Affairs in Syria is presented by two centers in the city of Damascus. At the beginning, the GDCC reports to the Ministry of Agriculture and Agricultural Reform, after it was affiliated with the Ministry of Finance, and the Ministry of Justice and its dependencies will change according to circumstances and actually to the MLAE, and there is a GDCA in every governorate. The GDCA in Syria built in four main stages:

- The first stage: extends from the Arab occupation, until the emergence of the mythical Ottoman Empire, where real estate was subject to Islamic law.
- The second stage: extending from the emergence of the Ottoman Empire until 1857, when Real estate properties were subject to Islamic law and Arab regulations.
- The third stage: extends throughout the Ottoman era into the period extending between 1857 until the period of the French mandate, when the provisions of the religious law were clarified and their synthesis included unified texts known as the "Majla" laws, include the laws of real estate ownership and the laws of obligations and contracts. In

the year 1858 AD, the establishment of the department of the Land Registry, meaning the real estate registry, followed after several years by establishing the departments of the "Al daftar khanna". This method is based on the use of simple records in real estate records, which include their rights real estate, luxury and usufruct rights in-depth with them, as well as investigations, empty spaces and agreements. This method is based on the use of simple entries in real estate records, which include their rights real estate, luxury, and usufruct rights in-depth with them, as well as investigations, empty spaces, and agreements.

- The fourth stage: related to the French mandate in which four resolutions have been issued in March 15th, 1926, 186-187 -188-189- formed the basic law for the countries under the French mandate. Establishing editorial and selection committees. The 186 & 187 resolutions were related to the Liberation and Determination Committee and the 188 &189 resolutions for real estate records (Shaddoud, Faiq, 2016, p.42).

The actual real estate work in Syria, the main challenges and the new initiatives

The GDCA in Syria consists of Cadastral documents that allow the possibility of knowing the physical and legal status of the real estate, in relation to real rights, easements, relocation and emergency amendment and every change in the real estate registry is not made without the existence of a contract, and this contract can deal with two different types of documents, which consist Including the real estate registry, namely:

- Property book.
- Supplementary documents: the daily record, records of identification and editing, cadastral plan and supporting papers.

The tasks performed by the GDCA can be summarized as follows:

- ✓ Identification and liberation work: It aim to document real estate properties with real estate sheets and cadastral plans, where the total area of Syria is estimated at 18.52 million hectares, and 97.6 per cent of the total lands subject to identification and liberation are almost completed, noting that the Badia is not subject to delineation and editing work. The total number of real estate areas in the Syrian governorates reached 9,140, and the number of real estates is approximately 5,000,000.
- ✓ Meet the demands of citizens and official bodies: Real estate interests provide citizens and official bodies with what they need in terms of real estate transactions such as: parceling, acquisition, real estate improvement, correction and restoration of boundaries, surveying the status quo and annexation and unification projects, as well as meeting their needs by looking at the contents of the real estate registry And obtaining the documents related to this data such as: real estate restrictions, data, title deeds and cadastral plans.
- ✓ Maintaining and managing real estate records.
- ✓ Amending and updating records in accordance with the restrictions and provisions in force.
- ✓ Recording of sales, transfer, and secretion operations.

- ✓ Organizing and keeping an alphabetical index of the names of the owners and the properties they own.
- ✓ Organizing, managing, and keeping a register of the names of those prohibited from disposing (Faiq Shaddoud, 2016).

After 10 years of conflicts, the problems and difficulties facing owners of real estate right in Syria are many, and the most important of them are:

- The difference in the policies and approaches that govern them from one region to another. There are regions that depend entirely on the distribution of real estate rights and funds by legal means (legal inheritance inventory), and others that depend on the distribution by the legal method (a legal inheritance inventory).
- The absence of many owners and owners of real estate rights, some of them killed during the conflict, the others left the country or sometimes went to live in other cities looking for safety.
- Theft of real estate records from some regions and cities, which forced the employees of the real estate departments to rely on the civil registry instead of the real estate registry, and here there are major problems that may lead to serious consequences, such as the person claiming ownership of a property in the absence of real estate records proving this or reversing it, and the possibility of selling the same property for many times for many person at the same time, due to the inability to place sales signals on the real estate newspaper, and the large number of sales that are not properly documented, which leads to a lot of real estate problems, disputes and chaos, as well as the evasion of real estate owners from taxes and the rights registered on them (lawsuit signs, signs Mortgage) for the lack of a real estate newspaper, as these rights and references are not mentioned on the daily records.
- The existence of real estate records for many cases in some areas outside the control of the state, and the inability of real estate rights holders to access to their estate records.
- The absence of maps of the Survey Department in some areas, such as some villages in the countryside of Aleppo and the regions in north-eastern of Syria.

According to this challenges, public administrative records and management systems related to housing, land and property face today a huge challenge characterized by loss, damage or destruction, of property and the difficulty to manage the land because of conflicts over tenure rights or absence of owners as there is only 5,582,968 refugees registered on Syria Regional Refugee Response in the 23th of December 2020 (UNHCR, 23 December 2020).

The role of Regional Planning Commission

Following to increased initiatives and studies of spatial and functional distribution for land use on the local governance and at sectoral levels to develop comprehensive plans addressing regional development which marked by duplication of efforts and lack of spatial coordination between sectoral ministries. The establishment of the Regional Planning Commission in 2010 by the law N° 26/2010 which indicated a major shift in planning methodology and approach in Syria came to completing the planning structure in Syria and

to bridge the gap between national and local levels and institutionalized tools for effective planning patterns by introducing a new level of planning. The Regional Planning view as a tool to reach the balanced development by taking in the consideration specific planning mechanisms which link the different initiatives at investment, planning and policymaking with the comparative advantages and needs of each region. The main responsibilities of RP commissions are based on:

- Development of the National Framework for Regional Planning (NFRP). The NFRP will provide a comprehensive data and vision that will link local levels of planning to broader structural plans at governorates level, including urban settlement and rural development plans. In coordination with the strategies and plans presented by sectoral ministries. In this context the NFRP was prepared and will be launched in mid-2021 (Al Watan Journal, 01, December 2020).
- Development of Regional Plans following the adoption of the NFRP, a planning region will be delineated to prepare regional studies and plans based on solid analysis and data. The Role of the RPC in developing regional plans have based on the NFRP to grant more flexibility at regional and local levels and to assure the specificity and the added value of each region and at the same time the conformity with the NFRP.
- Monitoring of Regional Development and Spatial Changes by reviewing and auditing all public and private projects of regional significance to assure quality of development and its alignment with NFRP and National Strategies Plans (UNDP, SAR, 2011).

According to the above responsibilities, the institutional structure of RPC has developed and implemented an administrative structure related to the Ministry of Local Administration and recently to the Ministry of Public Works and Housing to facilitate its mandate and role in the country. The RPC is responsible for organizing the planning and spatial regional development process throughout the Syrian Arab Republic. Since its establishment, the Authority has worked to develop a number of planning interventions at all spatial levels, through which it seeks to restore a balance between the various human activities and the resulting consumption of limited natural resources. This is done by verifying the ability of these resources to regenerate and the sustainability of development levels.

The Organizational Structure of RPC is based on the following directorates:

- 1- Chairman of the Authority.
- 2- The advisory board.
- 3- Vice President of the Authority.
- 4- Central directorates:

Directorate of the Authority President's Office.

- Regional Monitoring Directorate.
- Directorate of Spatial Projects and Stimulating Development.
- Spatial studies and plans directorate.
- Informatics Directorate.
- Regional plans directorate.

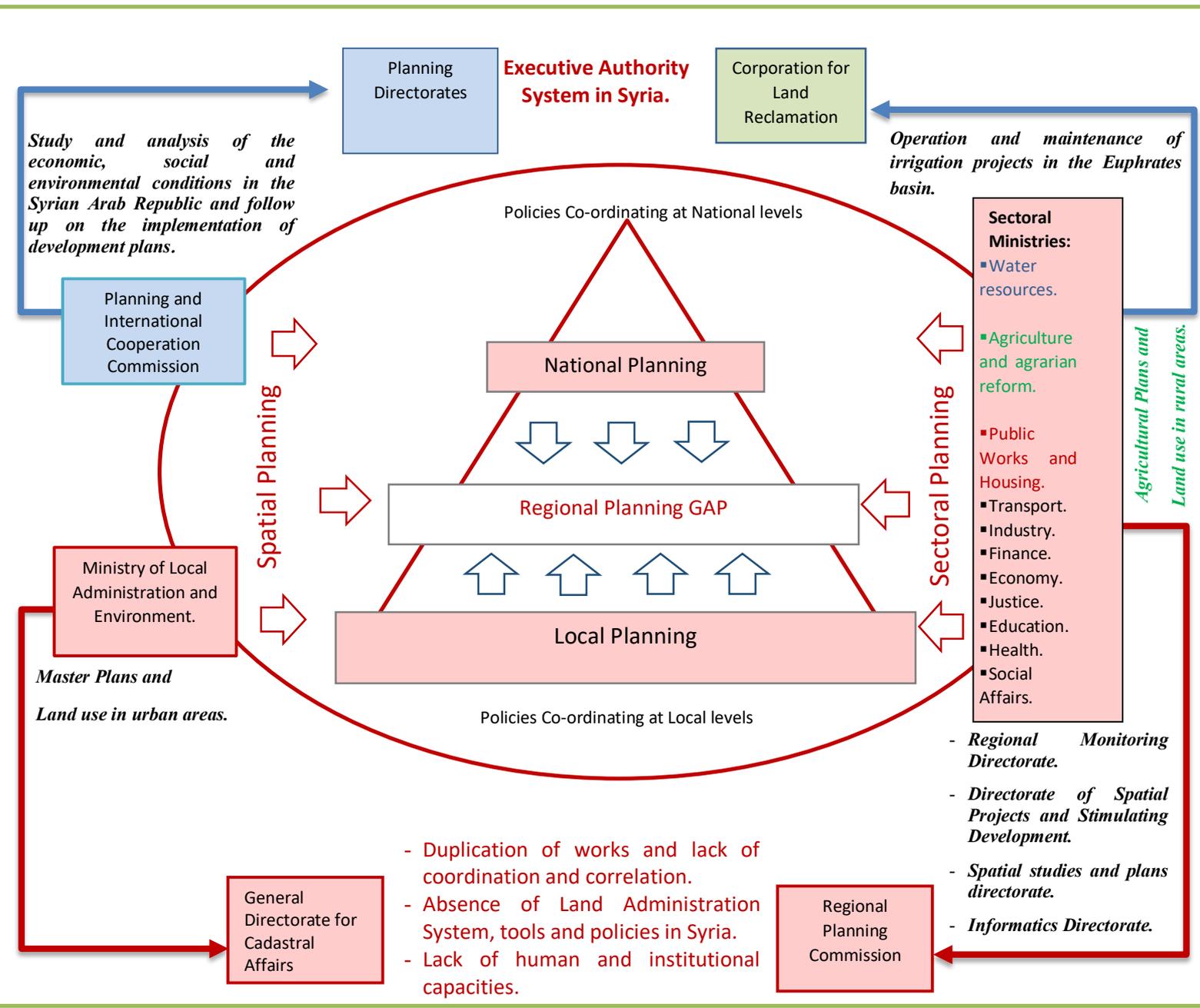
- Directorate of Administrative, Legal and Human Resources Affairs.
- Directorate of Planning and International Cooperation.
- Finance.

5- Regional administrations.

The above structure and position for RPC under the direction of ministry of housing and public affairs with a very modest institutional capacity (technical and human) will not allow to produce an effective Land Administration System, because it need another administrative position which allow to take this high responsibility at national level. Therefore, the analysis related to Land administration & Planning systems in Syria shows many crucial challenges:

- The multiplicity of authorities in Syria, the absence of a clear strategy for land (Administration, Use, Tenure & Development).
- Duplication of works and lack of coordination and correlation between the national entities at horizontal levels (sectoral) and vertical between (national, regional and local).
- Absence of Land Administration System, tools and policies in Syria.
- Lack and weakness of human and institutional capacities.

Figure 11: The planning systems in Syria at National, Regional, Local, and sectoral levels.



Source: Roula MAYA

C. The legal framework for land development

There are at least four laws related directly to urban planning and land development; that need quick review to explore the legal and institutional environment for local and regional planning can be referred to :

- The Urban Planning Law (Law No. 5/1982): An old law so that any amendment to it became very late. The main point of criticism is that the concept of "organizational plan", which is central to this law, is inconsistent with the new realism of urban development in light of the market economy. Therefore, concepts that are still new to Syria, such as the

master plan, must be introduced and applied in a new approach to managing land in urban areas.

- The Urban Expansion Zones Law (Law No. 60, 1979) and the Public Housing Law (Law No. 26, 2000): There appears to be confusion about “expansion areas” or housing expansion areas between the two laws (Law 60/1979 and Law 26/2000).
- The Violations Zones Law (Law No. 9, 1974): “Irregularities” constitute a large category of urban areas in most cities, but the problem mainly lies in the procedures for obtaining lands necessary for urban development. Currently, the impetus for urban planning is the practice of major cities, using the method of expropriation (expropriation) as the main planning tool.
 - Areas for which expansion lands are obtained at agricultural use prices in accordance with Laws 60/79 and 26/00, whether the lands are used for agriculture or not. The public sector then sells the land for individual private development with some restrictions imposed on the new private owners: that is, not to sell until the land is built. The inevitable result of this approach is that once the landowners smell the news of allocating the land as an expansion area, they will begin to sell the lands for development projects and the possibility of obtaining a better price from the new owners and construction contractors than they may get from the state under the acquisition.

On the other hand, real estate records are considered among the sovereign matters of each country, and they have a very great importance, as they are considered as the personal identity that defines the property, and the criminal record that shows the rights and signs that it owes (such as the right of mortgage, the right to prevent disposal, and others). It has a prominent role in preserving real estate rights against loss and theft, as well as commercial real estate activity indicating the country's recovery and the advancement of the economic and urban development. In addition, the importance of real estate records lies in real estate lawsuits, for any real estate lawsuit the owner is obligated to show real estate registration data, and place the property in terms of lawsuit signals, mortgages, and precedence in any action or sign on the real estate newspaper. In any case, if there is an absence of real estate records, the work of the judicial authority will be interrupting and that will cause the loss of real estate rights, and the rights of owners.

The legal framework for defining property rights in Syria becomes so complicated based on different political visions for organizing society – Islamic, Ottoman, French Mandate, and Ba’athist (EU, 2017, p. 9). Each period had its specific codes and regulation, which reflect the social contract of that period. Each time, the development of land and property rights codes built on previous codes with some modernization altering the substance of old statutes and creating new sets of unresolved contradictions. According to this context, the accumulation of these contradictory laws prevented the correct implementation of land management system. Therefore, the regulatory role of formal institutions was very limited and ineffective and that facilitated the corruption and the inefficient land management.

The French Mandate (1920–1946) in Syria witnessed a most important change of the land administration system. Starting in 1922, only two years after their control over Syria, a law was issued to regulate the pawning of real estate. In 1925 the first law to define State

property was issued (Reg 144/1925). Another law was issued in 1926 to regulate the private estates of the State (Reg 275/1926).

Both laws are symbolic in having codified the notion of the sovereign away from the person of the Sultan. By ignoring the status of Amiri lands, these two laws moved these lands one step away from the leasehold agreement envisioned in 1858 to more of a freehold status. According to this context, the French prompted new regulatory structures targeted regulating territorial controls across their colonies. The French authority launched a series of legal ordinances to regulate land and property issues in which they invested in setting up complex bureaucracies to manage these issues.

A large area of peri-urban lands around the cities were privatized. Furthermore, the two laws defined the status of public lands. All lands and spaces defined under this classification are thus inalienable State lands. These laws instigated a major transformation in the urban scene. Semi-public spaces designating communal spaces, where the maintenance, cleaning and policing were left to the communities under Ottoman law, became State property and the State took over the responsibility of managing all such spaces. By ignoring the status of Amiri lands, these two laws moved these lands one step away from the leasehold agreement envisioned in 1858 to more of a freehold status. Usufruct rights on such lands were annulled and the possibility of reclaiming dead land was also limited.

Furthermore, the French authorities proposed in 1926, three important regulations which define the land management system in Syria up to today. Regulations 186-188-189 of 1926 outlined the process of delineation and demarcation of land, the land registry administration (the land cadasters), and the real estate court, respectively. The land management System built on complex bureaucratic process that ensued developed cadastral maps for most of the inhabited Syrian territories over the next 20 years (the major urban areas were mapped in the first 5 years). The system involved a complex set of interrelated mapping and documentation tools that included:

- Maps: often used as key maps to define the different circumscriptions of the city.
- Circumscription maps were produced to a scale of 1/500 in cities (although in some areas of high real estate value like the souks the scale was larger). In rural areas the scales varied. These maps were completed using different techniques. For the first time, aerial photos were used to produce fast base maps that were then triangulated on the ground.
- Surveying benchmarks and points of repair were set on the ground to create a national geodetic system. Primary, secondary and tertiary points were laid on the ground across the country. The system was based on a central point and was transferred to the remote parts of Syria through ground-surveying techniques that resulted in some large errors amounting to dozens of meters by the time the system reached the outer limits of the territory (mistakes that would later cause some concern for many of the border communities, particularly in the north-east).
- A demarcation report: Each plot was demarcated on the ground, party walls were defined and their ownership assigned, the description of the property was recorded and the minutes were documented in an individual report signed by the owner or legal

tenant, as well as the neighboring property owners. These reports were preserved in special folders, and copies were made for day-to-day use. Recourse to the original record is only possible with a court order to avoid the possibility of forgery.

As a result, these types of misconduct for land management participated in increasing the forms of injustices between the citizens and that accumulated over the years, and the problem of property rights was one of others major cause behind the popular conflict started in Syria in 2011. The main problem of land property rights in Syria is going back to unresolved problems related to land property rights and the multiple tenure types which prevent the correct definition of property. The lands property rights in Syria based essentially on the Islamic codes which define the legal and regulation for property issues according to political and social considerations.

The relation of the public to the private: establishing property is directly related to the system of taxation, and the obligations of the state towards its citizens. However, the State is also a major landowner and its own property serves important social, economic, and political roles. However, regulating the public domain has major implications for private property (planning regulations, production of public goods and the state capitalistic enterprises and their competitive impact on private property).

Both circumstances related to droughts before the crisis and conflict since 2011 have pushed populations living in rural areas towards urban centers, forcing families to abandon their homes, farming and herding fields and stayed in urban areas or in some cases become refuges outside the country. Some of those habitants returned to their property later, the others want to come back, some of them want to sell their property but they lose or did not have any documentation or evidence to prove the ownership of land or property. A lot of cases, a secondary occupation of properties abandoned by displaced populations may heighten the risk of local conflicts. This complex situation may prevent people from returning to their lands and property and is a real challenge for future land administration.

6. Land administration paradigm to assure food security and peacebuilding in Syria

The analysis of spatial, institutional and legal frameworks shows that there are many challenges need to be resolved, therefore a new paradigm has been developed with priority actions and outputs according to the figure 12. Three main goal outcomes proposed consequently according to the following:

- **Goals/Outcome1:** National program for urban/rural agriculture implemented and Public participation enhanced.
- **Goals/Outcome2:** Tenure systems and laws reformed.
- **Goals/Outcome3:** Institutional capacity development strengthened.

A priority Actions/outputs proposed according to the above goals to assure spatial, legal and institutional goals according to FELA.

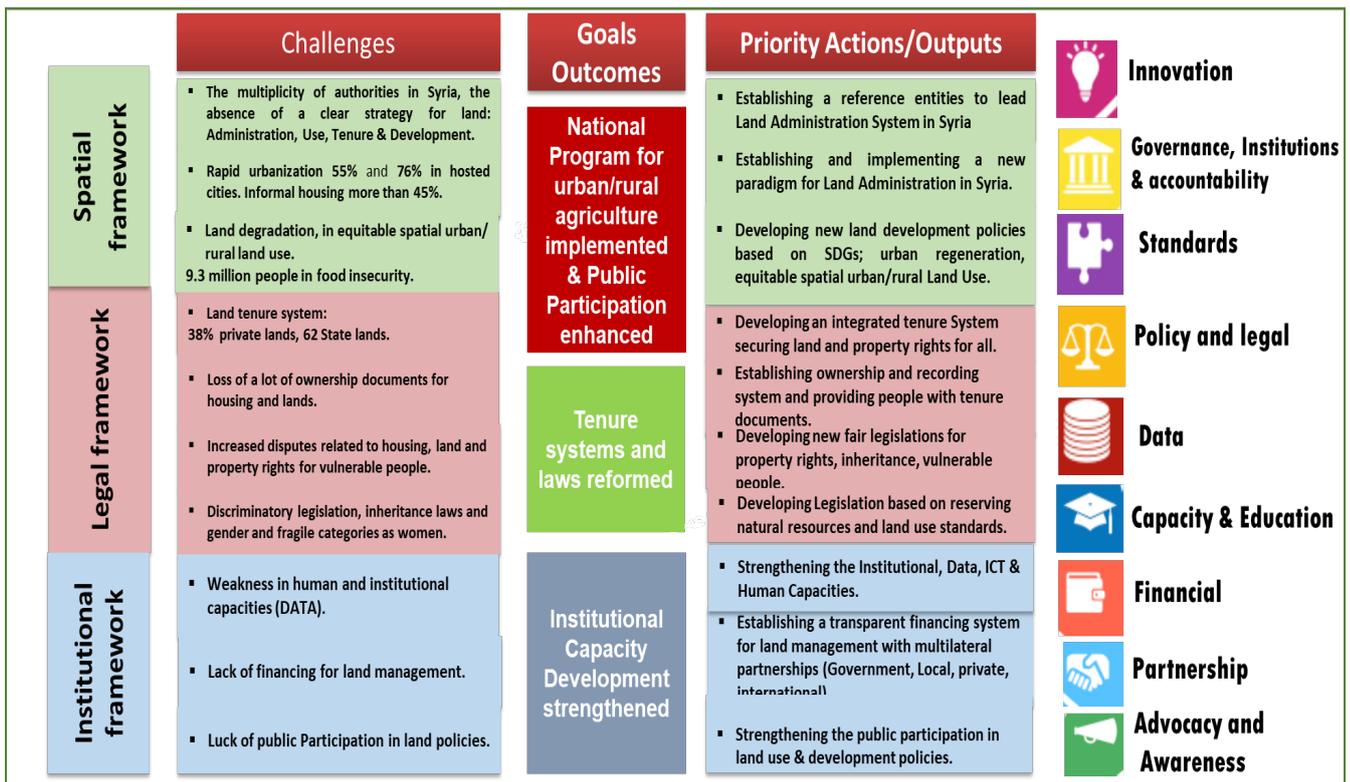
Effective and Efficient Land Administration System based on Green Cities and assure food security is the main output for this paradigm based on:

- Integrated Land Planning Urban/Rural- Green cities and urban agriculture.
- Land Investment.
- Implementation and monitoring.
- Land Administration Assessment.

The Effective and Efficient Land Administration System Main Outcomes are:

- Green, healthy cities and people.
- More jobs for women and youth.
- Affordable food prices for people.
- Decent income for People and families.
- Closely connected urban and rural areas.
- Reduce transport cost and energy.
- Assure innovation & Food Security.

Figure 12: Land Administration Paradigm to assure food security in Syria: Challenges and Priority Actions.

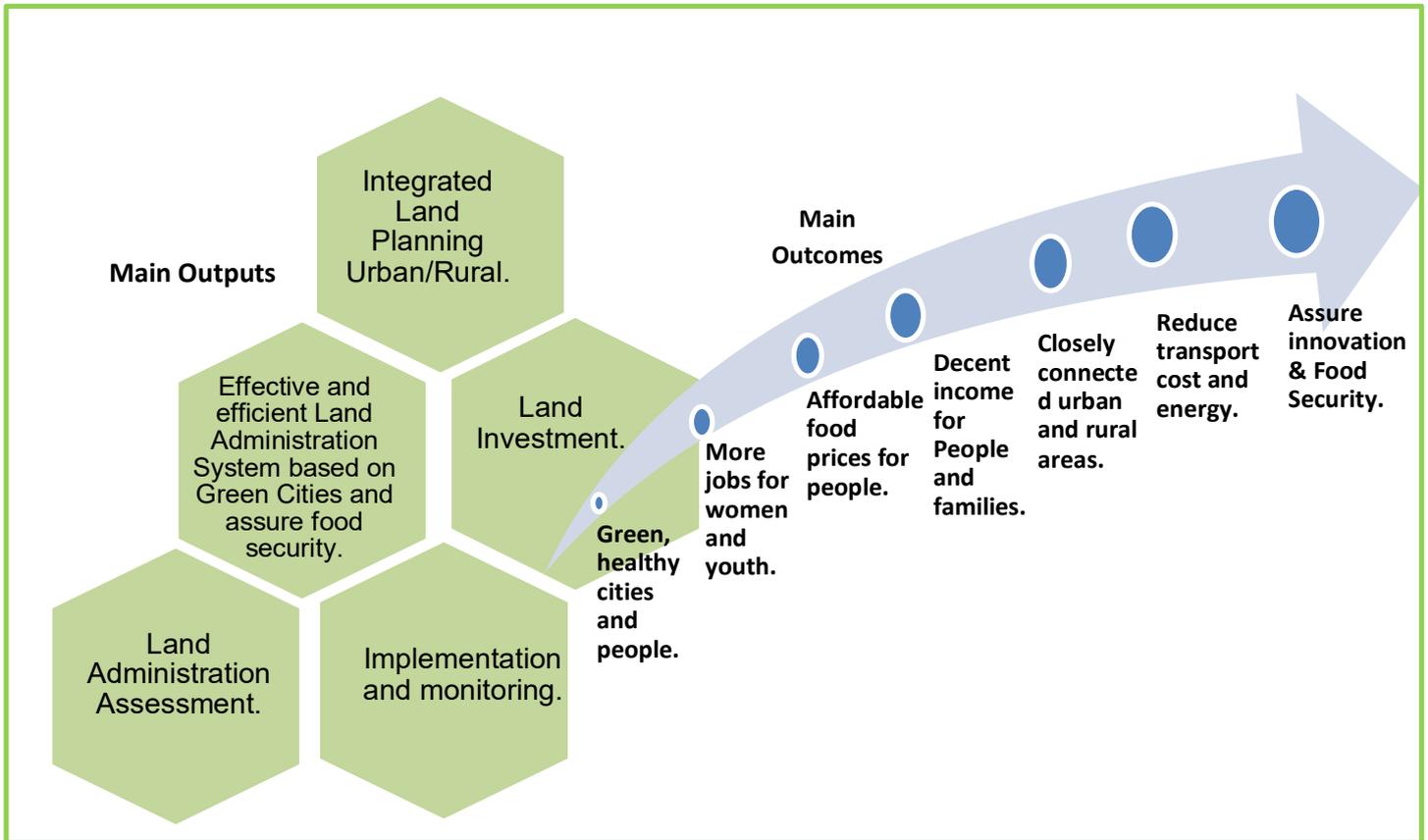


Source: Roula MAYA

According to the above paradigm, and according to the OECD, land use planning should be more than a technical exercise, it should be a political and democratic process that mediates the conflicts over land use. This is a key tool for the planners for preparing the strategic development plan, they should ask the citizens to imagine the future they want for their cities and to work together hand by hand to get there. Therefore, the effective planning should reflect and develops the common community needs and vision (OECD, 2017, P: 3).

The National program for urban/rural agriculture is the first key Integrated Framework, Spatial, legal and Institutional paradigm according to figure 13.

Figure 13: Effective and efficient Land Administration System.



Source: Roula MAYA.

Figure 14: Children in Syria are looking for a peace and safety future .



Conclusion

Syria loses more than 30 years of development and that will have so long-term effects on future generations. All most of Syrian population and lands have been affected by the conflict, and the results have been tragic. National Lands witnessed successive stages of fragmentation, division, and reunification between the State and the other parties of the conflict. Many areas have gone out of state control since the start of the conflict in 2012,

the territories under the control of the Syrian government have dropped from 40 per cent to 15 per cent of the total land in the country (UN-ESCWA, 2020, p.16). The conflict has led to the destruction and weakening of the economic and social infrastructure and strongly impacted people life's and safety in all dimensions. It is estimated that the national poverty rate exceeded 80 per cent in 2020 (UN-ESCWA, 2020, p.16). This study shows that Land Administration, land tenure, and land rights are essential keys for assuring food security considering the current crisis in Syria with the focus on the relief operations, steps that address land governance issues must also be considered in any response. The land use is a multidisciplinary and multi-levels approach at spatial (national, regional, local), sectoral (economic, social, and environmental). Therefore, the land administration needs today more integrated approaches to manage spatial development and that consider the wide range of policies that affect land use beyond the planning system. Housing, transportation, energy, water, agriculture, tourism, and economic development make demands on land and affect how it is used.

Urban and peri-urban agriculture can help improve food security which become first priority in Syria today via several ways: growing food at home or via a cooperative reduces the cost burden of acquiring food for the poor, puts more food within their reach, and reduces seasonal gaps in fresh produce. The short production cycle gives the advantage to this practice. One square meter of garden can provide 20 kg of food per year. Since 2005, FAO announced that "*With the world's cities growing rapidly, farming in and around urban areas needs to play a bigger role in feeding city populations*". (FAO, 2005). The urban and peri-urban farms provided food for 700 million of peoples who lived in cities in 2005 and that equal the quart of earth population at that time.

Furthermore, and according to World Urbanization Prospects: the 2014 Revision, the movement of urbanization is accelerated from 30 per cent in 1950 and go up from 54 percent in 2015 and it is expected to increase to 60 percent of world population by 2030. The accelation of urbanization rates and decrease of rural pouplation respectively was accompanied with accelation of poverty level which become over 80 per cent of Syrian people in 2021. The FAO studies show that poverty rates in many cities are rising, and ever-larger numbers of city residents face difficulties accessing the food they need. In some developing countries, the urban poor spend 60 per cent or more of their income on food. Therefore, the urban agriculture involves using small plots such as vacant lots, gardens of roof tops in the city can take a forme of small "micro-gardens" or larger structures (FAO, 2005). According to WFP, as of April 2020, 9,3 million people in Syria were considered food insecure, with one million severely food insecure and that request immediate and urgent responses from national and international community.

The full integration and engagement of all stakeholders is essential for successful implementation of land administration system. The efficacy and effective capacity development is crucial for successful implantation of Land Administration System. The public participation is the key of success effective land administration implementation. Peacebuilding in Syria, need and request the cooperation of all local, national, regional and international efforts to ensure prosperity and wellbeing for all.

Annex-1- Main Land Administration Stakeholders

- **Syrian governmental institutions:**
 - Ministry of Local Administration and Environment.
 - The Ministry of Agriculture and Agrarian Reform with all its relevant institutions.
 - Ministry of Water Resources.
 - Ministry of Public Works and Housing.
 - Ministry of Social Affairs and Labor
 - Planning and International Cooperation Authority.
 - Ministry of industry.
 - Ministry of transport.
 - Regional Planning Commission.
 - Ministry of Finance.
 - Ministry of Tourism.
 - Ministry of Information.
 - Ministry of Justice.
- **Syrian NGOs:**
 - General Union of Peasants.
 - Women's General Union.
 - Revolutionary Youth Union.
 - National Union of Syrian Students.
 - Engineers Syndicate.
 - Association of Agricultural Engineers.
 - Farmers agricultural employment.
 - Chamber of Agriculture.
- **The private sector**
 - NGOs, non-governmental organizations
 - representatives of shepherds and livestock breeders
- **National Coordination Mechanisms:**
 - Presidency of the Council of Ministers.
 - International Planning and Cooperation Authority
 - Committee for the preparation of sustainable development goals
 - National Committee to Combat Desertification
- **Regional and international organizations:**
 - UN- HABITAT
 - United Nations Convention to Combat Desertification, UNCCD
 - The Global Mechanism for the International Convention to Combat Desertification (GM)
 - Global Environment Facility (GEF)
 - The Arab Centre for the Studies of Arid Zones and Dry Lands ACSAD
 - United Nations Development Program (UNDP)
 - United Nations Food and Agriculture Organization (FAO)
 - World Food Program
 - United Nations Environment Programme UNEP
 - International Union for Conservation of Nature and Natural Resources (IUCN)
 - United Nations Educational, Cultural and Scientific Organization
 - World Health Organization

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