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# DEFINING INDICATORS OF COOPERATION NETWORKING AND LEARNING DEVELOPMENT IN PORT-ZONES' NEIGHBORHOODS: APPLICABILITY IN ALEXANDRIA AND PORT SUDAN

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## Abstract

Lately, Cooperation Learning & Networking Development programs (CNL) has approved success in achieving rapid growth in urban areas. Its potentiality to afford remarkable improvement supports the joint learning and cooperative innovation processes in different cities in different territories. Also, networking for cooperative learning is benefiting the technological development in communication means and social media to provide wider involvement in urban growth to achieve better life cities. This paper is aiming to understand the constituents of CNL in urban development. Also, it targets neighborhoods in port areas which need prompt, effective and collective improvement in the urban life of cities in developing countries. This research is held by studying the possibility and applicability of a suggested project for 9 neighborhoods at port zones in Alexandria (Egypt) and Port Sudan (Sudan). The research identifies the potentiality of CNL development by considering assessing indicator. These indicators are studied throughout SWOT analysis and opportunities' exploring for the prospective growth towards a sustainable development. It also suggests a future extension for the project to include more port zones in similar cities in the region to achieve common goals.

## Keywords

Cooperation Learning & Networking, Urban Development, Port-Zones Development, Alexandria, Port Sudan.

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**ABSTRACT:** *Lately, Cooperation Learning & Networking Development programs (CNL) has approved success in achieving rapid growth in urban areas. Its potentiality to afford remarkable improvement supports the joint learning and cooperative innovation processes in different cities in different territories. Also, networking for cooperative learning is benefiting the technological development in communication means and social media to provide wider involvement in urban growth to achieve better life cities. This paper is aiming to understand the constituents of CNL in urban development. Also, it targets neighborhoods in port areas which need prompt, effective and collective improvement in the urban life of cities in developing countries. This research is held by studying the possibility and applicability of a suggested project for 9 neighborhoods at port zones in Alexandria (Egypt) and Port Sudan (Sudan). The research identifies the potentiality of CNL development by considering assessing indicator. These indicators are studied throughout SWOT analysis and opportunities' exploring for the prospective growth towards a sustainable development. It also suggests a future extension for the project to include more port zones in similar cities in the region to achieve common goals.*

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## 1. INTRODUCTION

Recently, the inescapable swift transformation that's facing humanity makes processes of development inapplicable without using integrative programs. The 21st century is bringing the most challenging system of problems that are impossible to be solved individually or partially. The solution must be comprehensive and collective (Martin, 2007). Integrative programs are needed to be adopted by countries, governments, institutions, societies, investors, practitioners, academics and others. They must gather efforts for the desired goals. (Atiti, 2013; Parsa et al., 2014)

Due to the previous, CNL (Cooperation, Networking, and Learning) development program is one of the most affordable solutions. It has the method of connecting global/local societies to share and exchange their knowledge, experience and manners to achieve common aims through collaborative activities containing learning systems, emphasized agendas, networking and communicative actions. It has approved high efficiency in fulfilling goals in different levels rapidly and simultaneously. According to the international declarations of (Mortimore, 1998) and (Mortimore, 1998; UNECE, 2016), this type of development includes joint learning, interregional programs and cross-border. Cooperative development is grounded on the exchange of knowledge and experiences to achieve the best outcomes as fast as possible. It also stimulates actions in united, integrated and collaborative groups of activists in their field. (Contractor & Lorange, 1988)

In this research, we are willing to understand the basics of CNL program in urban development in the next part (**COOPERATION NETWORKING & LEARNING DEVELOPMENT**). This part will explain the nature of CNL programs and its constituents (actors, actions, tools, and objectives). After that, indicators are explored and defined for Port-zones (**INDICATORS OF DEVELOPMENT IN PORT ZONES**). Then the forth part is dedicated to the case study (**SUGGESTED COOPERATION PROGRAM: ALEXANDRIA AND PORT SUDAN**). This part describes the nature of the selected areas and also explore their similarities and differences in a comparative analysis. The Fifth chapter (**DISSCUSSION**):

**OF COOPERATION NETWORKING & LEARNING DEVELOPMENT)** is dedicated to SWOT analysis that has been done to explore and discuss the applicability of CNL program in Alexandria and Port Sudan. Then the research is concluded by some recommendations for future developers in the two cities (**CONCLUSION**).

## 2. COOPERATION NETWORKIN & LEARNING

Experimentally, all cases of regional development have revealed the importance of closer linking between the innovative minor programs of learning.(Asheim & Isaksen, 2002; Porter, 1998) The relative conventional communication is very appealing in this kind of programs. Thus the core method of CNL Development is to combine efforts of different actors to be collaboratively effective in running development program to meet the determined goals. The lack of communication and the absence of usable common languages between different disciplines and territories affirms that cross-border plans are needed in the development. So, the joint learning and joint development are both required to fulfill CNL programs. These, basically, depending on the exchange of experiences to meet the best results by providing a field for communication. Thus why a good system of networking is required to connect people of the action to share, exchange and provide knowledge and experience as they mentor each other (Tsen et al., 2012). As it comes, any program has a system that based on a certain process to carry out the goals. This program should have actors (doers), activities (actions), tools and facilities, and goals; so, for more understanding, the constituents of CNL development program are going to be explored in the following:

### 2.1 Actors

Essentially, they are the members those fulfill the program to be accomplished. CNL programs seek to cross borders among these actors to achieve the best performance.(Valkering, Beumer, de Kraker, & Ruelle, 2013) (As shown as Fig. 1). Identifying suitable actors and partners, who are able to contribute decisively in such oriented program, is vital to provide the ultimate efficiency to the process. Actors may differ in the various number of developing programs. (CBPO, 2011). Mainly there are common actors those collaborate in such programs, as explained in the following:

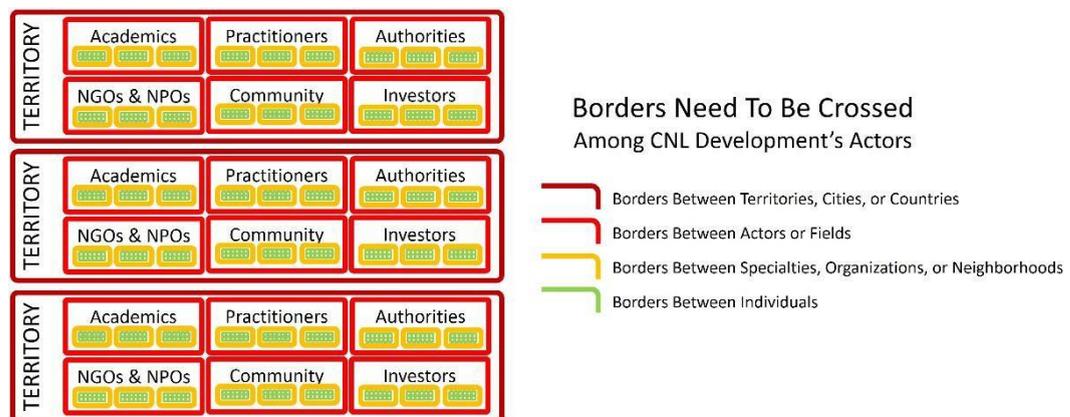


Fig. 1. A diagram shows the Actors of CNL development in the different levels and the types of knowledge borders that must be crossed between them.

Reference: (Atiti, 2013; CBPO, n.d.; Contractor & Lorange, 1988; Crisp, 2015; Valkering et al., 2013), done by the author Jan 2017

#### 2.1.1 Academics:

All members of staff and students in the universities, colleges, institutes and research centers are capable of sharing and contributing to such program. In the different territories, they have meetings, common learning programs, research programs. They coordinate the project (or sub-projects), benchmark activities, site visits, network platform discussions and their collaborative works. This type of actors shares their knowledge by various means such as

lecturing, training, meeting, publishing researches, exchanging students or staff members, making special events, doing public seminars and so on. They assure the implementation of scientific methods in the program. (Collazos, Guerrero, Pino, & Ochoa, 2002; Atiti, 2013; UNECE, 2016)

### 2.1.2 Practitioners:

They are the real doers and very important for such programs. All technicians, workers, employees, handicraft, and freelance in the field that is needed or targeted in the program should be involved. They share their knowledge and experience by organizing meetings, training programs, site visiting, exchanging experts, sharing innovative practices and supporting the attitudinal promotion. They discuss the proper attitude for the development program, then share it with community members. (Atiti, 2013; CBPO, 2011)

### 2.1.3 Local stakeholders (citizens):

Community members and the inhabitants of the targeted areas are responsible for developing their own community by sharing their efforts in the development program. They may also have associations, committees, and registered/nonregistered social groups. Their role is to focus on how they apply their knowledge, skills, and efforts within the program. They should be aware of their needs and their liabilities. Attitudinally, they share and exchange their problems, solutions and creative practices with other communities those are involved in the program. They use the provided tools to contact each other but they may use other ways like informal meetings and private phone calls. (European, 2002; Fox & Prescott, 2004; Porter, 1998)

### 2.1.4 NGOs & NPOs:

NGOs (Non-Governmental Organizations) & NPOs (Non-Profit Organizations) are most likely involved in CNL program according to how their fields and abilities are matching with the program goals. They are making working groups to coordinate actions in the different disciplines and places. They collaborate by sharing their Innovative methods of previous success in previous programs. Actually, they work parallel to governmental institutions to afford reliable promotion the community. (Asheim & Isaksen, 2002; Contractor & Lorange, 1988; European, 2002; Fox & Prescott, 2004)

### 2.1.5 Local Authorities (Governmental institutions):

in all levels of collaboration in CNL program, Governmental organizations must be involved. They have to care about such programs by giving supports, creating platforms of cooperative work, setting plans with specialists and coordinating work in the public sectors. Also, they have to ensure, encourage, and support investors and NGOs to collaborate on such programs. They also are responsible for facilitating the all possible obstacles that may interrupt the collective work. (Atiti, 2013; Collazos et al., 2002; Parsa et al., 2014; UNECE, 2016)

### 2.1.6 Investors and Professionals (private renovation contractors):

They are the power of resource in CNL development program. They support programs financially and technically. They contribute in such programs to take the direct and indirect benefits. Direct profits they would gain by fulfilling the development program and indirect benefits such as governmental facilitations, community trust and getting good publicity. They also must share their knowledge in their field of experience with others. (Asheim & Isaksen, 2002; Contractor & Lorange, 1988; European, 2002; Fox & Prescott, 2004)

## 2.2 Activities

Commonly, cooperative development activities are dedicated to cross boundaries to benefit knowledge sharing to make a swift change in the community. These activities follow different methods and different approaches. As they described by (Jantsch, 1980) there are three different approaches for sharing knowledge across boundaries. They are classified in three approaches: syntactic, semantic, and Pragmatic (Carlile, 2002). Activities should execute the joint learning among the members of CNL program and support knowledge exchange throughout the different approaches. Syntactic Approach is concerning on making stable syntaxes to ensure accuracy While, the Semantic Approach is recognizing the availability of a syntax to avoid difficulties that comes out of the wide range of possible interpretations to guarantee the fluidity in contact. The third approach, Pragmatic, stressing on consequences of the different means of understanding things dependently. These approaches basically resolve the reluctant attitudes of changing knowledge. It focuses on communication by using different acts of repositioning and relocating members in the program to understand others' point of view. Also, they maintain dynamic activities to provide more communicative qualities than the use of verbal language.

Accordingly, there are numerous activities that could be held in such programs as the following:

### 2.2.1 Project coordination:

In order to plan, organize and evaluate the various activities of project, the project is coordinated throughout direct contact amongst project partners. They may initiate meetings, phone calls, email exchanges, etc. (Atiti, 2013; CBPO, 2011; Collazos et al., 2002)

### 2.2.2 Benchmarking activities:

This type of activities are majorly done by academics with the aid of NPOs and governmental sectors. Their activities has to be done to test and evaluate different practices in the program. They effectively detect new problems and innovative practices. (Atiti, 2013; CBPO, 2011; Collazos et al., 2002)

### 2.2.3 Societal activities:

The execution of any CNL development program needs active participatory in communities. The partners in society share their knowledge among this societal activities. This type of activities help raising awareness and sharing information. Also they may contain training, cooperative sub-projects occasions which related to specific actions in the program. (Crisp, 2015; European, 2002; Fox & Prescott, 2004)

### 2.2.4 Thematic meetings and Events:

CNL Development programs usually have thematic actions. They involve each actor in a specific program for a particular goal such as economic growth, achieving sustainability, preserving energy, etc. These events are created to gather all members of the common program (theme) to explore/identify the different insights. These activities also create suitable ambient to exchange good practices in the targeted theme. (Atiti, 2013; Carlile, 2002; Saunders, Evans, & Joshi, 2005; UNECE, 2016)

### 2.2.5 Site visiting:

Generally, visiting sites are for reaching targeted places to create basic knowledge, to share experience and practices, to receive new information and to evaluate the progress. (Atiti, 2013; Collazos et al., 2002; Crisp, 2015; UNECE, 2016; Valkering et al., 2013)

### 2.2.6 Exchanging Programs:

This type of activities are for exchanging members through different territories and different disciplines. These program may held to concentrate efforts by providing a pragmatic approach of learning. Usually, educational Institutions already have exchanging programs but it may be done in communities, NGOs, workmanships and governmental bodies. (Contractor & Lorange, 1988; European, 2002; Fox & Prescott, 2004; UNECE, 2016)

### 2.2.7 Monitoring and Evaluating:

All participating partners have to monitor and evaluate their contributive efforts in the program. During the implementation of such actions, they must be held to assess which factors support meeting goals. These actions are supervised by local authorities but also the have to involve all related partners in the assessment. (Collazos et al., 2002; Saunders et al., 2005)

## 2.3 Tools & Facilities

Generally, cooperative development programs rely on the effectiveness of networking tools that are used in. Networking is the system that connects all members of the program. It may have sub- systems to connect members of different disciplines or projects. The affectivity of the program depends on its usability and the power of connectivity. In the other hand, there are many facilities that could afford suitable healthy conductive contacts during the program for all collective activities.

These means of networking are varied and numerous, but they are usually as the following:

### 2.3.1 Websites (public and member area):

A web-based public area of a CNL development program is usually made to inform the wider community of the program about the ongoing events and processes. It typically contains project's description with explaining the different activities in the targeted areas. Also, it provides many services that may include: news, agendas, social platform, etc. A membership system also is recommended to be established in the site to keep participants updated and create a place for exchanging data, media, and documents. Also, it helps to create channels for discussions. (Crisp, 2015)

### 2.3.2 Portals:

Beside the website, the directors of the program could provide, as usual, prototypal learning platforms. These platforms are commonly designed to smooth exchanging knowledge. They might be specified to serve certain fields, parts, projects, disciplines or members for special connection of cooperative works. These portals play vital roles in spreading innovative practices and ideas. (Crisp,

2015) (Anderson-Bill, Winett, & Wojcik, 2011)

### 2.3.3 E-learning:

Regularly, it is recommended to create an efficient means of information technology that supports social learning. The context of knowledge exchanging and communication uses web tools for creating virtual communities that afford to learn programs with social interactions. This system uses web-based programs and applications to provide additional learning environments to promote self-sufficiency of the learner and to emphasise active approaches of participative learning. (Anderson- Bill et al., 2011)(Allen et al, 2005).(Atiti, 2013)

### 2.3.4 Publishing & Broadcasting:

Generally, information transferring is fulfilled throughout media. In CNL development, published materials are very helpful in spreading awareness and transferring knowledge. These published materials could be written, audio, or visuals. So, they may be published in the national or local media like popular TV or radio shows, public magazines, and newspapers ...etc. Also, they may be published in special media that dedicated to the program such as newsletters, internet blogs, YouTube channels, social media sites pages...etc. (Ward, House, & Hamer, 2009)

## 2.4 Goals & Objectives

Considerably, growth has different strategies. Cooperation system is one of these strategies. It regarded to facilitate the collaboration of efforts due to achieving mutual goal/s. These mutual goals are usually considered as the main aims. These main aims or goals can be advanced into several specified objectives in CNL development program. These specified objectives clarify program themes more accurately and actually, it will help to enable actors of all levels from the different territories to define their program. One of the main objectives on CNL programs is to match between experienced regions and less experienced regions in such topic, theme, process or field. So, all regions provide knowledge and experience to each other in different fields. This will reduce the time and help all targeted areas to be promoted jointly. Besides, it certifies innovative practices within cooperative projects. Commonly, interregional development programs set main aims those are usually the same in every project of urban development. But there will be specific additional goals according to coordinators' policies, nature of the areas, or state of economy ...etc. This where a CNL program differs from another one. (Atiti, 2013; Carlile, 2002; CBPO, n.d.)

## 3. INDICATORS OF DEVELOPMENT IN PORT-ZONE AREAS

Generally, indicators are beneficial in providing feedbacks for project coordinators. But also they are useful to external observers who evaluate the experience to measure how successful was it and how it could be applied in a different context. By them, progress is comparable in each place, part, level or discipline. Practically, representing indicators is important for us as researcher and developers to evaluate the applied program in port- zone areas. Therefore, it is essential to understand the different indicators of measuring the feasibility and success of a developing program. So as to determine the basic indicators that help to confirm whether the suggested project is applicable or not.

Accordingly, our indicators are divided into two categories (General Indicators of CNL development) and (Port-zone's Development Indicators) to understand each constituent and how to assess every item and their potential role to the overall objectives. Indicators are discussed as in the following:

### 3.1 CNL Development General Indicators

Obviously, indicators are very important to achieve a comprehensive evaluation for CNL development by systematic method covering every part (Actors, Activities, and Tools & Facilities) in comparison to the main goals (Collazos et al., 2002; Schernewski, Schönwald, & Katarzytė, 2014). All these parts will be covered to comprehend what's needed to achieve the aimed atmosphere for this kind of developing programs (DiSano, 2002; Guidelines & Methodologies, n.d.; Kusago & Kiya, n.d.; Schernewski et al., 2014), hence, these indicators are distributed to each part individually as follows:

- Actors' Indicators:

Generally, indicators for actors are made to measure the size of program implementation among different types of actors. Therefore, they concern on assessing: diversity of actors specialties, number of the covered levels, how many borders were crossed, and to what extent that was effective (Atiti, 2013; Collazos et al., 2002; Schernewski et al., 2014). In addition to that, (DiSano, 2002) suggested that is vital to calculate the number of active and effective members and their role in initiating innovative solutions, while (CBPO, 2011) focused on the number of trained actors during the program those promote their abilities, skills, knowledge or experience through each process or the whole program.

In view of that, it is possible to predict and to measure the expected effectivity of any suggested

program by observing and collecting statistics about types of jobs in the selected area, number of available fields, and number of employed and unemployed young members. Moreover, it is possible to find more useful data if any collaborative program has done there before. This will help to estimate the number of efficient members those could participate in the suggested program. (Kusago & Kiya, n.d.; Valkering et al., 2013)

### 3.1.1 Actions' Indicators:

For this category, indicators measure the number of actions, events and times of using networking tools in each program. The number of errors is essential to detect the number of interval solutions during the process. (CBPO, 2011; Crisp, 2015; European, 2002; Guidelines & Methodologies, n.d.; Valkering et al., 2013) Besides, number of revising checks, effective exchanged messages between members, and number of strategic modifications are main signs for the efficiency of networking system in creating and promoting different actions (Atiti, 2013; CBPO, 2011; Plummer et al., 2012). Nevertheless, the influence of these events is a great sign of success and it can be measured by counting the number of effective events, number of attendees, number of new members, and the number of created platforms because of this actions (Atiti, 2013; Crisp, 2015; Saunders et al., 2005; UNECE, 2016). Actually, this category is not easy to be predicted. Yet, the elements of encouraging creating the suitable situation for actions to take place can be detected and observed. The number of available facilities in the targeted areas with the number of potential members of the same discipline will create a good opportunity to enhance actions of the process and increase member involvement. (Oecd, 2009)

### 3.1.2 Indicators of Tools & Facilities:

Basically, the indicators of tools and facilities are focusing on the number of used networking and learning tools and their efficiency by users' evaluations. Also, the period of use for both total and effective periods is important to indicate the effectivity of tools. Moreover, the number of times of promoting/updating tools is a great indicator for successful networking and cooperative program (Atiti, 2013; CBPO, 2011; DiSano, 2002; Guidelines & Methodologies, n.d.).

As a result, the number of tools is important to identify the prepared and available networking tools in the targeted program area and the accessible facilities that would help in such program. Also, the handiness of communicating tools and the availability of local promoters for this kind of tools in the targeted area will ensure the success of using this tools during the program. (Norris, Schnädelbach, & Qiu, 2012)

### 3.1.3 Port-zones' Development Indicators:

These indicators are based on the nature of these areas and what are their main objectives. These indicators have been set to measure how a development program would fulfill its own objectives. In 2016, created ten groups ran an indicator-based methodology with a scoring system to help regional authorities to evaluate their sustainability performance in coastal zones (Schernewski et al., 2014). Their indicators were based on sustainability relevance, availability of data, and readiness for field use. Although, these indicators were limited to sustainable development, the same methodology can be applied here. They are divided into four main categories: Economic, Environmental Quality, Social Well-being, and Governance. Earlier, A Chinese assessment held by (Yeung & Hu, 1992) to the impact of modernization policies of China's government on coastal zone development and urban development by improving infrastructures, services toward investors and administrative support. This study put basic criteria for evaluating development for port-areas according to the nature of this kind of places. Afterward, many studies followed this study such like the research of (Hansen, 2010) of turning the statics of futuristic coastal zone urban development programs as a model to be understood in order to assess the environmental impact or rising sea level due to global warming.

As a result, indicators of developing port-zones could be determined as: policies improvement toward port-zones areas, raising awareness, attitudinal improvement, physical changes in built-environment, social changes, economic changes, environmental changes, ports' integration, and goals achievement. These will lead to understand how the opportunities and threats for development could be defined in order to ensure applicability. Therefore, the main points to be checked are:

- Political Readiness for changing their orientations toward port-zones areas.
- Inhabitants' awareness of the importance of their place to the city.
- The situation of built environment and infrastructure.
- The quality of social life in the port neighboring areas.
- Economic policies toward foreign and local investors.
- Environmental awareness in the area

- Availability of development facilities such as: research institutes, national organizations, services ...etc.

#### 4. SUGGESTED COOPERATION PROGRAM: ALEXANDRIA AND PORT SUDAN

At large, Egypt and Sudan have mutual history, heritage, and culture with the addition to the solid geo-social bonds (Country Report, 2001). This means more potential cooperative program to achieve physical, social and economic growth in both countries simultaneously. In addition to that, and as related to our study, there are two main water lines that link this territory together which are: river line (The Nile) and maritime line (The Mediterranean Sea and The Red Sea). Developing urban settlement on the maritime line is the targeted scheme of the paper.

Cooperation networking and learning programs could play a vital role in developing the maritime line area that is located strategically in the heart of the Middle East region. Since 1869, Suez Canal links the two major seas. And this explains why this maritime line is crucial to the adjacent lands. Many cities are needed to be developed to intensify benefiting their unique locations. There are many boundaries that need to be crossed. So, a joint learning program is the vibrant and effective way to gather tension, care, and collaboration in all fields and levels in the targeted areas.

In our study, Alexandria and Port Sudan are selected among numerous various cities that are in the same maritime line in order to be a prototypal program that can be re-applied and duplicated in different cities in the same region. The two cities were selected due to their situation and similarities. Each one is considered as the second major city in its country. Next, to that, the nature of the area of study in the two cities will be defined and then the similarities and differences between them will be explored.

##### 4.1 Nature

The first selected area is located in Alexandria. The ancient city that was founded by Alexander the Great around 331 BC (Haag, 2004; Ruffini & Harris, 2004). Its prominent location on the Mediterranean made it one of the most powerful cities in history. It has different properties (touristic, economic, social and cultural properties) that enrich its potentiality to be one of the most developed cities. The selected area in this city is located between the eastern port and the western port which consists of five neighborhoods: (Souq El-samak El-qadeem, Abo Shosha, Qabu El-mallah, El-balqatrya, and Souq El-barseem). This area is one of the oldest inhabited areas of the city. It has mixed activities and mixed land uses like residential, commercial, institutional, administrative, educational and recreational. It neighbors the western port and located on the sides of al Nasr Street (one of the vital roads in Alexandria). (As shown as Fig. 2)

The other area is in Port Sudan which is located on the Red Sea coast. There had been settlements in the area since ancient times (Mastaller, 1978; Perkins, 1991, 1993). But the city was established officially in 1905 to be a replacement port for Suakin's port where ships had faced the problems of growing coral reef on seashore (Breen, Forsythe, Smith, & Mallinson, 2011; "Suakin - Wikipedia," n.d.). The selected neighborhoods are in the heart of the city between the northern port and the southern port. It surrounded by water stream on three sides which is called (Khore Kilab). These neighborhoods are: (Greeks' Neighborhood, Dem Al-madina, Al-souq Al-Kabeer, and Al-gami'a (university) Neighborhood). It consists of various land uses that contain: residential, commercial, institutional, administrative, educational and recreational uses. (As shown as Fig. 3)



**Neighborhoods:**  
 1. Souq El-samak El-qadeem  
 2. Abo Shosha  
 3. Qabu El-mallah  
 4. El-balqatrya  
 5. Souq El-barseem

Fig 2: Top: A wide shot shows the targeted area in Alexandria from the Western Port. Reference: alex-egypt.blogspot.com

Bottom: maps show the selected neighborhoods in Alexandria  
 Reference: maps from maps.google.com and edited by the author



**Neighborhoods:**  
 6. Greek's Neighborhood  
 7. Dem Al-madina  
 8. Al-souq Al-Kabeer  
 9. Al-gam'fa Neighborhood

Fig 3: Top: An Aerial View of the targeted area in Port Sudan. Reference: Taken by Tahir Taha published on facebook.com/sudanese photographers

Bottom: maps show the selected area in Port Sudan. Reference: maps from maps.google.com and edited by the author

## 4.2 Comparison:

Definitely, the two areas have much in common. And this part is dedicated to compare the nature of the selected neighborhoods in the two port-zones in Alexandria and Port Sudan. This comparison is formed by exploring similarities and differences as the following:

### 4.2.1 Similarities:

- **Location:** Basically, the two zones are located in port-zones. Each area is between main ports of the city. The targeted neighborhoods in Alexandria are located between the eastern and western ports while in Port Sudan they are in the middle between the northern and southern ports. (As shown as Fig. 4&5)
- **Land Uses:** Generally, the land uses are varied and mixed in the two areas. Both have residential, commercial, governmental, offices, and mixed uses areas.
- **Activities:** As they have similar land uses, they also have similar activities. Their main activities are commercial. Markets are varied according to products' types. Also, the two areas contain different fields of productions that rely on the skilled handicrafts. People there have been inheriting these crafts through time. (Even though Port Sudan is founded just 112 years ago, but the area was inhabited for several decades and people had passed their experiences from generation to other). (Oushi, 1994; Perkins, 1993; Reed, 1983)
- **History:** The neighborhoods in each city are in the oldest inhabited areas of their city.
- **The need for development:** People in the two areas are complaining of the commercial exploitation and new changes that have appeared in the area which causes heterogeneity in their urban life. (Labib, 2004; Oushi, 1994)
- **Climate:** Precipitation season in both cities is during winter season between November and February. ("Climate & Weather Averages in Alexandria, Egypt," n.d., "Climate & Weather Averages in Port Sudan, Sudan," n.d.)



Fig 4: A photo shows the Western Port of Alexandria. Reference: masrelbalad.com, taken by Kamel Tarek



Figure 5: A photo for the Northern Port of Port Sudan. Reference: facebook.com\sudanese photographers, taken by Mohamed Alatt

4.2.2 Differences:

- **History:** Alexandria’s neighborhoods are older than those in PortSudan; they have heritage buildings.
- Morphology:** Port Sudan’s neighborhoods are mostly regular in their plot pattern while Alexandria’s the majority of the plot pattern is spontaneous and natural. The neighborhoods in Port Sudan contain more open spaces than those in Alexandria. (As shown as Fig. 6). Also, based on the observation, building heights in Alexandria’s have been dramatically changed recently; it reached 30 floors in some parts while the highest buildings in Port Sudan’s do not exceed 7 floors height.

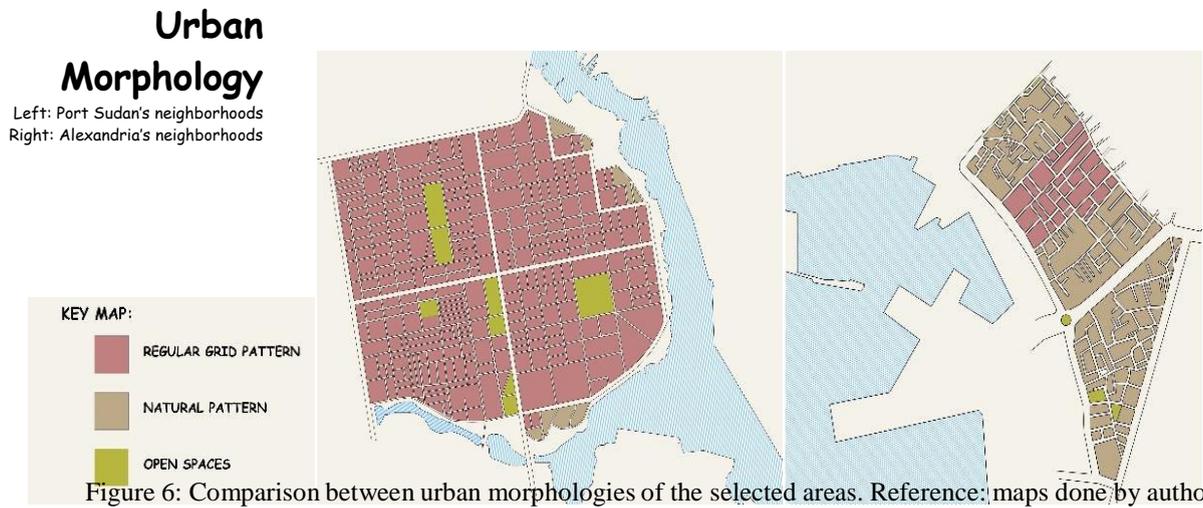


Figure 6: Comparison between urban morphologies of the selected areas. Reference: maps done by author based on maps from maps.google.com

**5. DISSCUSSION: APPLICABILITY OF COOPERATION NETWORKING & LEARNING DEVELOPMENT**

**5.1 SWOT Analysis:**

This segment of the research carries out the development program in a form of SWOT analysis for the targeted areas. Concurrently, the SWOT analysis covers the available constituents of urban development and its relevant aspects besides the potentialities of applying any CNL program according to the indicators of CNL development and Port-zone development as discussed before in chapter 3. (**INDICATORS OF DEVELOPMENT IN PORT-ZONE AREAS**). Consequently, strengths, weaknesses, opportunities, and threats for organizing and applying the CNL development program are briefed in the following table.

Table 1: A SWOT analysis for applying urban development and CNL programs in the targeted areas  
Reference: Data collected from site visits and interviews by the author

	<b>Urban Development</b>	<b>Cooperation and Learning</b>
<b>STRENGTHS</b>	<u>Central location</u> is benefitting the two areas to play an effective role in the total urban development of their cities which will courage other neighborhoods to be promoted.	<u>Mixed activities</u> provide more possibility of applying CNL development in the area. They gather members of different disciplines to be in contact to cross borders effectively.
	Both areas have great <u>potentiality of growth</u> . They need to be developed in different sectors and their physical and demographical structures make them very improvable.	Both areas have plenty of <u>local workmanship, expert practitioners and handicrafts</u> . Which enhance applying CNL program in every level in exchanging knowledge.
	The nature of having <u>mixed activities</u> in the targeted areas raises the chance of developing. The diversity of jobs, practices, fields and specialties will support the possible programs that would benefit the variation of activities.	Due to <u>the Cultural closeness</u> ; the time and efforts will be shorten. As opposite of other CNL programs that need to make cultural rapprochement between different territories due to the variation in languages, heritage and social habits.
	The readiness of <u>local workmanship and handicrafts</u> in different types of industries. These local labors will save the cost and minimize expenses to the lowest.	<u>Adjacency to the ports</u> is a great benefit of the areas in creating different activities and in using shipping transportation for collaborative programs.
	In being a <u>touristic zone</u> (in both areas) It creates base to bring investments to the urban development.	<u>High-education institutions</u> are available in both cities. This creates good environment of creating joint learning programs.

WEAKNESSES	<p>Basically, neighborhoods have various <u>commercial zones</u>. Their variety in types, nature of products and seasonal demands upraise economic movement.</p> <p><u>Adjacency to main roads</u> makes each area has a powerful influence on city development.</p>	<p><u>Governmental Institutions</u> are vital to CNL programs that automatically enhance development quality. It will raise interest of local governments for the program.</p> <p>According to the demographic statistics, <u>young people</u> are the majority. Their efforts will be very beneficial for development.</p>
	<p>Both areas are suffering from <u>heterogeneity</u> among old buildings and new buildings (height differences, unmatched urban scene, unpleasant views and contrast in lifestyles); due to that services and benefits are imbalanced.</p> <p>In the targeted area, there are <u>insufficient and decaying infra-structures</u>. Inadequacy of services due to population growth and the shortage of resources.</p>	<p><u>Lack of knowledge and lack of awareness</u> will cause several delays for the CNL program. This lack is due to the discontinuous development. This gap must be covered to ensure wider participation in the program that fulfil objectives.</p> <p>The both cities are in developing countries that are suffering <u>Instable economics</u>. This fluctuation in the economic state causes several damages and lack of growth in different sectors.</p>
	<p>In the two areas, their central location makes them suffering <u>traffic jams and heavy stress</u> on the road networks due to population growth.</p>	<p>In contrast of the historical bonds between people of the two countries, a huge <u>gab in communication</u> exists between public and government which adds more difficulties to apply program.</p>
OPPORTUNITIES	<p><u>Benefiting Shipping transportation</u> in supplying area by needed products, and amenities. Also, it provides chances for increasing income by exporting local products.</p> <p>Touristic Nature of the areas raises their opportunity in <u>bringing funds and foreign investments</u>. Several projects could be managed there. These projects will be attractive due to their profit as they develop areas.</p>	<p><u>Governmental institutions</u> those exist in the area will raise the chance of creating collaborative management in the program, this will support the attitudinal processes in the CNL program.</p> <p><u>High-education institutions</u> increase the prospects of applying CNL programs in the targeted zones. This <u>will enhance joint learning and cooperative activities</u> by researching, learning and spreading awareness.</p>
	<p>The advantage of <u>activities' diversity and livelihoods</u> in the areas will facilitate urban development in the multiple levels. It also may be increased or enhanced to achieve economic growth.</p> <p><u>Achieving sustainability</u> is the most alluring objective world-wide, it has the chance to be applied in the targeted area according to a well-planned and well-managed developing program.</p>	<p>The diversity of uses, skills, disciplines and practices in the area give a <u>great chance to exchange knowledge and experiences</u>. It enriches the probability of creating <u>innovative applies that boosts CNL development</u>.</p> <p>Moreover, <u>shipping transportation</u> could be useful in creating special events and conventional programs for gathering more actors to be included in the program.</p>
	<p>There is a great chance for each area to be the starting spark for urban development in the whole city due to their central location.</p> <p>The nature of the areas and their similarities and differences create <u>various possible themes</u> to be applied in the urban development.</p>	<p>One of the great things in the two areas is <u>activities and livelihoods</u>. It creates more chances for collaboration and creating different thematic programs.</p> <p>International Airports those are available in the two cities will create more chances to be useful in providing special transportation between them.</p>
	<p>The <u>difference in priorities in urban development</u> between citizens and government may create difficulties for applying a suitable plan for each.</p>	<p>The <u>difference in governmental plans</u> for urban development in the two countries according to the different priorities may cause obstacles or disarrangement in fulfilling a CNL development.</p>
	<p>The possibility of <u>public refusing</u> due to the lack of awareness. It may be similar to the previous point but it differs in the main reason.</p>	<p><u>Different political orientations</u> is likely the same, it may put obstacles on the way of collaboration or enforcing networking program.</p>
	<p><u>Economic crisis</u> in the two cities due to the fluctuated financial estate is the reason of discontinuity of development.</p> <p><u>Emigration of experts and high-skilled members</u> of the society outside the countries due to the economic crisis will worsen the chance for neighborhoods to be promoted.</p>	<p>The <u>lack of awareness</u> will make applying a CNL program very difficult due to the dependency of this kind of programs on public participation.</p> <p><u>Rapacity of local stakeholders and or investors</u> is very common in these type of strategic places that need to be promoted. This will cause several miscommunication among members.</p>
THREATS	<p>Due to the global warming, <u>rising of sea water level</u> is probable. It will cause different damages that is threatening the two areas. This threat has to be dealt with to avoid the <u>upcoming crisis</u>.</p>	<p><u>Emigration of experts and high-skilled members</u> will create a huge loss of knowledge, experience and efforts that are needed in such programs.</p>

Our study assumes that the Cooperation, Networking and Learning Development Programs are applicable in the selected two areas. It's ensured by the resulting opportunities that rely on the strengths of the two cities but developers should solve the weaknesses to overcome all possible threats that could obstruct development.

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### 5.2 Exploring Potentialities of Applying CNL Development in the Area:

In this case of study, the increase of global maritime trade will be very convenient to the Ports in Alexandria and Port Sudan. Generally, maritime ports are market boosters and good sources of numerous jobs in their areas. But they ought to contribute in developing the adjacent neighborhoods. Without ignoring the fact that the separated ports from vicinities (by wide roads as in Port Sudan or great walls as in Alexandria) have to be dominated to create a compatible urban development in the area. Developers may explore some examples from around the world to suggest what can be done to help their targeted areas to be developed appropriately.

In our case, they could benefit recent developing programs that have been done in port-zones of cities like: Hamburg, Vancouver and Singapore...etc. (Freemark, 2015). Usually this process is done before program but in CNL programs it is done incessantly throughout stages by exchanging knowledge between members (Atiti, 2013). The nature of the two cities and their region makes this project expandable to cover another cities on the Mediterranean and The Red Sea. (See possible cities that could join this program in different themes as shown as Fig. 7).



Fig 7: A map showing the possible cities that may contribute in the suggested program.

Reference: maps from maps.google.com and edited by author

According to our preliminary survey, we have come out with possible themes of development such as: touristic, sustainable, infrastructural, water front, water-lands' preservation, economic growth, mixed markets development, social based, industrial, or any improvement program that's sensitive to: greenery, health, recycling wastes, preserving energy, and or social cohesion.

## 6. CONCLUSIONS

In order to sum, Cooperative, Networking and Learning Development programs are favorable to achieve urban development rapidly and they are very convenient and applicable in Port-zones' neighborhoods development. CNL programs will benefit the nature of these areas that contain mixed activities, diversity in land uses, jobs, fields, and contexts. They also have the ability to support city development. So, collaborative efforts of different actors are important. Development actions are based on joint learning and how knowledge, best practices, and experiences are exchanged which need effective networking tools that create good communication to cross borders between different disciplines and territories. The case study of Alexandria and Port Sudan is discussed to create a general framework that helps developers to initiate such programs in such areas. Moreover, this collaborative programs must be evaluated in each category before, during and after the program. This evaluation should be based on indicators that help to measure its effectiveness and to what extent it fulfills their objectives. Indicators in this case are distributed between general indicators of CNL programs and indicators of the port-zones which are based on the nature of these areas. This indicators ensured that CNL development is highly recommended for port-zones neighborhoods in Alexandria and Port Sudan in a various number of themes. This program also has the ability to be expanded to include more cities in the region. This type of developing program it seems to be

very promising due to its benefits and its ability to achieve targeted urban improvement in very short periods. Also, we hope that our research will encourage other researchers to explore this topic further.

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