

GAZA RECONSTRUCTION AND DEVELOPMENT: THE RUBBLE REMOVAL PROJECT APPROACH TO POVERTY ALLEVIATION

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Abstract: Towards the end of 2008 Gaza strip witnessed an Israeli-Palestinian armed conflict. Three weeks of fighting had severely damaged the built environment and devastated the local civilians.

As part of the post-conflict development plans, which were prepared by the local authorities and supported by the international donors, the rubble removal project was a priority and a departure point for reconstruction and development.

Using a qualitative dominant approach, this paper demonstrates the role of this project in poverty reduction. It examines various mechanisms, which have been adopted to build the local capacity towards sustainable livelihoods. It argues that, despite the deteriorating conditions and the Siege in Gaza, long-term poverty reduction and gradual improvement in the quality of life may be possible through partnership, mobilization of the local resources, and empowerment.

It concludes that while the explicit goal of rubble removal has been accomplished, achievements on the implicit long-term goal of poverty eradication are significant but fragile. And that the preparation of a holistic vision and integrated urban development strategy is essential to maintain such achievements and promote further development towards sustainable urban livelihoods.

Keywords: capacity building; Gaza; poverty; sustainable development; urban livelihoods

INTRODUCTION

Sustainable Development and Poverty

While sustainable development seeks to improve people's livelihoods, poverty presents a major challenge to the development efforts to enhance the quality of life and

secure urban sustainability. Poverty is frequently regarded as an income-related problem; however recent development concepts demonstrate a shift towards a more holistic approach to poverty reduction [1-3]. Promoting social inclusion, supporting gender equality and empowerment; improving health and education and income-generation job opportunities are key components of this approach.

Poverty is expressed using several ways: income-based, basic-needs, social exclusion, human-development index and sustainable livelihoods approaches [4]. Income-based is the most widely used to assess levels of poverty which is manifested in unemployment rates, income and expenditure levels. Basic needs approach focuses on the availability of both physical and social infrastructure (services, hospitals and formal housing).

Social exclusion from another perspective gives an indicator for the politically and culturally marginalized persons as the immigrants. Human-development index approach focus is on the comparative measures of life expectancy, literacy, education and standards of living of a country. It includes physical, social and political dimensions. This approach considers the essential role of public management in creating the appropriate systems for tackling the issue of poverty in its fullest sense. Finally, sustainable livelihoods approach was promoted for the developing countries in the nineties of the last century. It emphasizes the need to promote solutions to poverty that are economically and environmentally sustainable and that recognize the importance of enhancing the asset bases of the poor. Community is deeply involved in prioritizing its individuals' needs.

The importance of income and consumption measures is embedded as being significant indicators of poverty. They have apparent advantages in creating what seems to be a clear line between the poor and non-poor. Therefore, voices of the poor

present the relationship between the poor and institutions as it is shown diagrammatically [5] in figure 1.

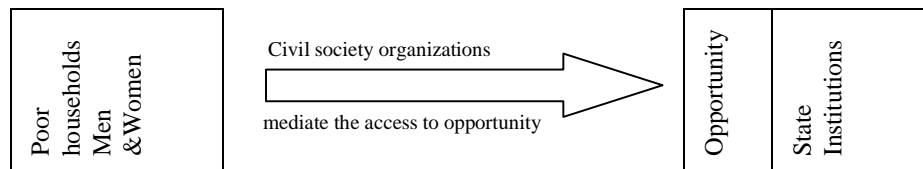


Figure 1: A relationship between the poor and institutions through civil society mediators

It can be concluded that the concept of sustainable livelihoods offers an approach that aims to place people at the center of the development process, starting with their capabilities and assets, rather than with their problems. This paper has adopted the concept to demonstrate the rubble removal project approach to poverty alleviation.

National Development Strategies and Poverty alleviation

The majority of national development strategies have adopted many of these global themes including pro-poor growth, high and sustained levels of education enrolment, promotion of child and maternal health, environmental security, infrastructure development, capacity-building, public-private partnership [6].

National development strategies to alleviate poverty are country-driven and country-owned. They are achieving results through partnership. Governments work with different stakeholders of different roles in society to become involved in both the formulation and implementation of a national development strategy [6]. Strategies to alleviate poverty tackle several conditions of poverty based on its defining approach. Strategies should set targets and agree on coordinated actions in each country. One important strategy is to build capacity using bottom-up and participatory approaches and to give priority to actions in hotspots. Other strategies are to combine policies and programs for social sectors with long-term development programs, to intervene directly to enable the neediest and strengthen poor urban livelihoods.

A number of interventions to be considered include pro-poor employment and asset generation combined with measures to assist the urban poor in meeting their basic needs and accelerate progress towards an open and fair international trading system [7]. A

capacity-based approach in carrying urban development relies on social mobilization and empowerment which are considered central aspects of projects that aim to put in place the foundations for long-term social improvement [8]. To achieve a strong and lasting impact on poverty, it is necessary to realize the interconnection between income and sustainable environment. Those entities should interact so as to allow coordinated actions on several fronts [9].

Socio-economic situation in Palestinian Territories was outlined in the Palestinian Reform and Development Plan (PRDP). This plan established the Palestinian strategy for development. It includes empowering youth, generating employment and activating economy and the private sector [10]. The sustainable vision of the Gaza Strip Regional Plan is targeting to serve the current population community needs without compromising the resources and opportunities for future generations [11]. Socio-economic development should be addressed and highly considered. This topic gains more importance after the three weeks of armed conflict in Gaza which has resulted in great damage. More than two thousands buildings were destroyed, resulting in thousands of tons of debris with a new wave of refugees [12]. Since the debris management is a major concern after any disaster [13], Gaza Reconstruction Plan includes the rubble removal project as one of the major projects [14]. Gaza reconstruction policy depends on hiring local staff and targets building their capacities. It aims at fostering the public-private partnership with all civil society organizations. It also emphasizes the reduction of financial expenses for the damaged properties' owners because of poverty and unemployment [14]. Rubble removal project represents the combined local and international

efforts to fulfill those objectives and restore the Gazan population's livelihoods [15].

CONTEXT

Development in the Gaza Strip-Palestine has been influenced by demographic, geographic and political factors. A continuous cycle of violence has dominated Gaza Strip since 1948. The recent conflict in 2008/9 has created an unsettled environment that held back the development process. Conflict affected physical dimension which resulted in the shortage of housing stocks and damaged infrastructure. It also affected environment with the huge amount of solid wastes and asbestos, phosphorus air pollution, destruction of the sewage network and others [16]. Governmental institutions also had their share in this destruction. Socio-economic dimension was severely hit as seen in the increased levels of unemployment and poverty.

In the past three decades, the Palestinian Authority offered job opportunities in the public sector during the post-Oslo period in order to establish governmental institutions. By 1999, government employment accounted for 32% of the total domestic employment in the Gaza Strip. However, the growth in the public sector outstripped the economic growth. In Gaza, hiring people in the PA has been adopted as a means to tackle poverty and reduce the high rates of unemployment [17]. By the end of 2010, unemployment levels in Gaza reached 37.8% [18].

This employment mechanism, on the one hand, while increased the number of the public employees beyond the real need, resulted in severe deterioration in their skills and capacities and subsequently their capacities to improve their incomes or living conditions.

On the other hand, the lack of job opportunities has led the highly-skilled workers to compete for low-skilled job opportunities, resulting in a growing unemployment among the low-skilled labor force [19] and further deterioration in living conditions.

Additionally, easy access to welfare support encouraged large proportion of unemployed people to become more dependent on benefits and the reluctance to seek job opportunities [20]. This relatively explains the deterioration in both individuals' skills and institutional capacities.

A large number of people in Gaza work in construction industry. The statistics of 2010 showed that construction sector, contributes 13.2% of the labor force as the third contributing sector after services 38.3% and commerce 19.3% [18]. This highlights the potential to influence poverty levels positively by targeting this labor-intensive sector.

Further, smaller size projects are more conducive to high labor content and are likely to attract small

contractors to become involved [21]. It helps to build their skills and capacities. Since human development is cumulative, missed opportunities to invest in and to prepare the future generation for the job market will be extremely costly, for both young people and society [22]. This demonstrates the significance of rubble removal project, which will be illustrated.

Reconstruction plans were prepared to restore the living environment for the affected population, starting with the rubble removal project to achieve this goal.

Gaza Strip population grows annually at 3.3% growth rate [18]. This adds more pressure to the fragile economy and the limited natural resources of Gaza as well as the social services such as education and health. During the last decade, poverty and unemployment in the Gaza Strip have risen rapidly. Palestinian Central Bureau of Statistics (PCBS) developed two poverty lines (relative and absolute) based on the monthly consumption of a family of 6 persons [23]. In 2010, PCBS shows that 38% of Gazan families live in poverty related to consumption levels [18].

Poverty in Gaza refers to external and internal factors. External factors include market dependency on Israel, political and geographical separation and mobility restrictions between the West Bank and Gaza Strip. The situation became worse in the second half of 2007 when Hamas has taken control over Gaza [19]. Additionally, the consecutive Israeli governments policies aimed at undermining the ability of the Gazan economy to build the necessary infrastructure required to sustain economic growth [24]. Trade restrictions, constraints on Palestinian labor mobility and termination of day-labour permits have adversely affected the local economy of Gaza and resulted in high rates of employments [17].

Internal factors refer to community characteristics. These include: i) dividing the local population into refugees and non-refugees; ii) Gazan's age structure where half the population are less than 15 years old; iii) high dependency rate due to low women involvement in the labor market [25] and the high number of disabled people as a result of the armed conflicts; iv) unemployment and loss of businesses and iv) lack of adequate health care [26].

These external and internal factors in addition to the deteriorating environment illustrate an unsustainable livelihood in Gaza and the development challenge. It also highlights the success of the project, as will be discussed below, in selecting development approach that corresponds to the local needs and capabilities rather than copying a generic approach that is based on international models and foreign experiences.

In response to the deteriorating living and the lack of adequate resources for development and reconstructions, the Palestinian Authority (PA) geared its policies to maximize the impacts of donors' humanitarian aid by engaging them into long-term development programs. This helped to priority programs such as poverty alleviation to receive more attention and funds. Programs such as Human capital development and the creation of the best environment for investment in the private sector are examples of development programs that intersect with the Palestinian MDGs and poverty eradication programs [27] which benefited from such policy shift.

Finally, this section demonstrates the key challenges to poverty alleviation in Gaza. The uncertainty of the peace process, the siege, limited labor market, redrawing priorities of development aid agenda, and high population growth rates and unbalanced demographic structure are serious obstacles. Therefore, development in Gaza needs a livelihood system that is able to involve wide segment of unskilled/skilled labor in order to alleviate poverty. In this sense, the Rubble removal project provides a good model to address those issues to enable wider framework and future development perspective.

RESEARCH METHODOLOGY

The main purpose of this research is to investigate the capacity of the rubble removal project to contribute Gaza development. It demonstrates the stakeholders' role in resource mobilization towards poverty reduction and capacity development through the available low technology.

Using a qualitative dominant approach and case study, research methodology utilized both literature review and field work. Literature review considered several reports and articles in relation to the sustainable development worldwide. Gaza development and reconstruction plans together with the documents of rubble removal project are considered to build theoretical background. Field work contains both interviews and surveys which were implemented between September and the end of November 2011. Interviews targeted several involved national and international institutions while the questionnaire included different groups of contributors; the owners of damaged properties, engineers and contractors who were involved in the project, and others. Further investigation and follow up for the field work extended through early 2012 using personal communications.

Researchers aimed at highlighting the role of capacity building and local mobilization in creating job opportunities to alleviate poverty. Open ended

questions were applied partially in the individual questionnaires and completely for the institutions' representatives in order to get more interaction and depth of understanding. Pilot questionnaire was considered to test its clarity and to avoid ambiguity. Questionnaires were distributed homogeneously along the different damaged areas in Gaza Strip. A stratified random sample size exceeded 10% of the whole population of the participants groups and was selected using the official Ministry of Public Works and Housing (MPWH) database.

RUBBLE REMOVAL PROJECT: PARTICIPANTS AND CONTRIBUTIONS

Gaza reconstruction plans included several projects to restore livelihoods. Thousands of tons of debris were accumulated, harming people either physically or psychologically, and preventing any actions towards reconstruction. The rubble removal project started six months after the cease fire to allow complete documentation. Time also was left to give the chance for both individuals and institutions to extract both their properties and memories and to prepare the necessary available equipments. Rubble removal project involved many partners to remove 2106 residential and 95 governmental buildings and mosques. These numbers did not include the buildings which were cleared without informing the MPWH [28]. A major project partner is the United Nations Development Program (UNDP) which requested the local government to carry out the whole project where they removed 1133 buildings [28]. Other project partners include United Nations Relief and Work Agency (UNRWA), Cooperative Housing Foundation (CHF), Norwegian Refugee Council (NRC), Mercy Corporation, Non Governmental Organizations (NGOs), Mine Action Group (MAG), qualified Palestinian contractors, official and volunteered engineers, citizens and the related ministries of Gaza government [29].

Development strategies of the project partners aimed at achieving several objectives. Ministry of Planning included the project in its reconstruction plan as a major task to restore Gazans' livelihoods and to reactivate the private sector through public-private partnership [14]. UNDP strategic plan objectives are to create further income generation and employment opportunities in addition to the strengthening of capacities to reduce poverty. The plan also aims at achieving equitable economic development by empowering the Palestinian People and their livelihoods through bottom-up approaches [30]. This strategic vision shifted the project from mere debris removal to promoting community capacities [31]. UNRWA aimed at improving population livelihoods through building capacity, alleviating poverty and

reducing unemployment as significant objectives to be investigated through this project [32].

Mercy Corporation For Development And Relief funded the debris removal of 239 buildings. The contribution was represented in restoring normal livelihoods through funding the rubble removal of some public and private buildings and mosques. Their vision for urban development promotes the public involvement from the design stage through the implementation up to monitoring. For Mercy, capacity building is the major goal for corporation and for the future development in Gaza. The Cooperative Housing Foundation (CHF) development strategy considered the building of local capacities. For the rubble project, they funded both financial compensations and training for the owners of 176 damaged houses through the job creation scheme. However, this organization practiced its role within limited framework due to current political difficulties in Gaza. Mercy and CHF funded the capacity building for volunteered, unemployed engineers and property owners.

Islamic relief vision for development includes capacity building through small-income generating projects. Islamic Relief contribution in the project targeted institutional capacity building and municipalities' support as a supplier for labor force and machinery, funded by Disaster Emergency Committee-United Kingdom (DEC-UK) [33]. UNRWA limited its contribution to the refugees' households who lost their homes in the conflict. The 142 damaged buildings inside the refugee camps were removed under a pilot project. It was in the form of full funding compensation which temporarily lessened the impact of the rising poverty and unemployment. Interventions supported clean up and rubble removal to improve living conditions and reduce the risk on public health and other hazards [32].

The owners of damaged properties participated by removing the rubble of 404 buildings to restore their livelihoods. The majority of the owners joined the project because of delays in removing the rubble of their properties as a result of huge amount of rubble, shortage of equipments and the limited number of working contractors. An individual agreement was established between the owner, the contractor and the MHPW in addition to other technical partners [28]. Governmental contribution is represented in the cooperation of Gaza MHPW with both of the UNDP in removing 93 building, the mosques committee in removing 14 damaged mosques and the Ministry of Economy for the whole feasible studies of the project. MPWH coordinated with all working partners in order to maintain both fair and unduplicated compensation [12].

APPROACH TO ALLEVIATE POVERTY AND SOCIO-ECONOMIC IMPACTS

Rubble removal project has its characteristic development features. Emphasis will be on the socio-economic features. It has also revealed the adopted sustainable livelihoods approach to achieve the strategic goal of poverty alleviation. Means demonstrated in this project to improve Gazan livelihoods are capacity-building, local human resources mobilization and the use of appropriate and low technology.

The first means in promoting sustainable livelihoods to alleviate poverty is through capacity building. The project shows building capacity for owners, contractors, engineers and for institutions. Training prepares employees for the Gazan future community which is practicing construction activities more than others even with the continuous threat of attacks. Small contractors got the chance to contribute small projects with owners. They also obtained new work equipments and qualified staff. UNDP targeted building capacities through pre-planned courses for the contributed individuals. They carried out different training sessions before and during project implementation.

The first group of courses included rubble removal training. It was provided by United Nations Mine Action Team (UNMAT) and MAG teams. Contractor and their staff, UNDP team, UNRWA, CHF, and others benefited from such courses. The second group of these courses targeted safe environment and safety procedures for the participants. The trainers of these courses were UNDP engineers, UNMAT, MAG and UNEP teams. The courses included safe handling of demolished debris in terms of removing the asbestos, Un-Exploded Ordinances (UXOs) safety workshops and awareness procedures through project implementation. Trainees were UNDP team, NGOs, UNRWA, CHF, NRC, heads of neighborhoods, CHF engineers and surveyors [34]. Volunteer engineers and citizens showed a higher commitment to acquiring new skills and field experience, active involvement in the urban development process and the ability to obtain better future work opportunities. Follow up for a group of participants showed that they either got permanent jobs or established new ones based on their acquired skills in the project [35].

The second means in alleviating poverty was through using the low technology as a proper technology. The project was implemented using simple tools as the appropriate choice in order to restore a safe and secure living environment. The use of appropriate technology helps to create numbers of job opportunities and mobilize the available human resources. It provided small-scale, short-term opportunities using intensive labor that relied on

simple in-situ technology. It also provided opportunities to reuse and recycle the rubble [36] which availed a large number of jobs for the unemployed workers. Low technology is used in implementing this project by all stakeholders until the proper technical equipment can be imported into Gaza [37]. MAG team members used simple devices to detect metal objects which resulted in few false alarms. Project participants used the conventional and available equipments through removing, sorting and crushing rubble. They used hoes, rakes and pickaxes for processing rubble in situ. In addition, a few numbers of jackhammers, excavator, cutting equipments, cranes, bulldozers and trucks were used.

The third means is shown through the community resources mobilization. The majority of damaged properties owners were mobilized through training and partnership of the individuals with the institutions. The trained owners' questionnaire revealed the importance of receiving a special training by the CHF which help them to become involved effectively in short-term and future long-term development [38]. The contribution of the owners' started at manipulation [39], motivated by the personal benefits. However the mosques' committee initiative demonstrated an opportunity to promote this motive towards the public good.

The project established socio-economic partnership. It enhanced the participants' capacities in the construction as one of the most productive sectors in Gaza. It gives them a good chance depending on their acquired competitive skills to get better job opportunities in the future. Many jobs could start for short or limited time, but they can easily turn to permanent jobs, which is in fact the case in most of these job creation programs. UNDP has formulated a US\$ 16 million job creation program through debris removal in Gaza. To do this, UNDP involved NGOs as well as contractors and their staff [40]. The UNDP contribution was through mobilizing human resources, training and empowering either for a number of institutions or individuals.

The removal and crushing of concrete rubble had generated more than (150,000) job opportunities which contributed in reducing poverty conditions in the strip [29]. The project provided more than 56, 000 working days through hiring fresh graduated engineers in supervision of the project. For the same target, local contractors were asked to hire graduated engineers, foremen, drivers, skilled and unskilled labor in order to decrease poverty and enhance the economic conditions [15]. Citizens who lost their properties also took a considerable part in training, which was mainly funded by the CHF. The project impacts have repaired socio-economic conditions. Workers were able to reach areas that were difficult

for the heavy machinery to get in. This in fact improves and strengthens mutual social relationships in the Gazan community. The workers were directly paid by the partners' sub-contractors maintaining their precious dignity.

The project's feasible study demonstrated that the budget exceeded the originally allocated 7.5 million Dollars [12], according to the UNDP [41]. This might refer to the inaccurate estimation of risk factors in calculating the cost, an inaccurate number of damaged houses and the involvement of several institutions in the estimation process [12]. It also could refer to the large number of involved national and international partners and workers of such a construction project looking for poverty alleviation approached by short-term intensive labor. The cost of demolition, transporting and crushing one ton of concrete rubble did not exceed US\$ 10.5 while the cost of one ton of crushed aggregate exported from outside Gaza which is around US\$ 15.38. The selling price varies from US\$ 22.5 to US\$ 50 per ton. The prices of sorting, removing and crushing of the rubble showed that the recycling of concrete rubble could be very competitive to natural crushed stone that has been used in roads and concrete industry. The price for crushed concrete rubble that is used in roads was around US\$ 7.5 per ton compared to more than 30 US\$ per imported ton of a similar product [29].

Assessing the project from a sustainable point of view revealed that it tackled poverty by offering individuals an income-generation opportunity to pay for their basic needs during the post conflict period. This relied on the community demographic and socio-economic characteristics as a young society with large numbers of unemployed labor. Participants achieved one goal within the allocated facilities and technologies. Bearing in mind unemployment and low skills, the project design offered a wide range of job opportunities, which attracted a wide variety of capacities and skills. It also allowed the local population to participate in the decision-making and helped to build a sense of pride.

CONCLUSION AND RECOMMENDATIONS

Implementation of rubble removal project was guided by sustainable livelihoods approach which utilized means of available resources, capacity building and simple technology. The required transformations involve a progressive approach that integrates with the pillars of sustainable development. The project is accomplished, but its long-term impacts are still visible and are expected to continue for the future. This research demonstrated an un-sustainable situation regarding livelihoods. This raises the need to address the local context as the foundation for any original solutions and offers lessons for future and similar projects. Researchers concluded the paper

with two levels which will reflect on the development model. The first level tackles the strategic and policy while the second handles the implementation level.

Strategy of socio-economic development in Gaza needs to consider Gaza unique context. Experience in the rubble removal project shows that adopting sustainable livelihoods approach is better matching the local context needs. Employment policies should be integrated with other policies such as educational, training and investment policies which are products of interconnected poverty influencing factors. Productively engaging both the youth and women is crucial in the development process; therefore they will be expressed in separate coming researches.

Sustainable development policy should combine both an academic point of view for development and locality of implementation. The promotion of socio-economic development to eradicate poverty in Gaza should evolve from the local community. It should meet community expectations for economy and financing development activities in order to promote their livelihoods according to their life systems. Fundamentals of Gaza development plans should be localized then around applying partnership, targeting community improvement and poverty reduction.

Political issue is a highly hindering factor. As many of the international community organizations refused dealing with Hamas, almost all international contributions were in the form of conditional cash. This has low potential in empowering high skilled training regarding both individual and institutional capacity building. Therefore, development policy should combine political dimension to the decision-making process as a high priority to develop the local community following the academic perspective in socio-economic development.

For the level of implementation, institutionalization is a vital pre-requisite to sustainable development. This implies the preference to establish partnership with existing organizations rather than working with project-specific organizations in a way that matches activities to their actual capacities. This perspective has the potential to tackle both the internal and external poverty factors in Gaza. Development of physical and financial infrastructure, as well as investment in human capital within the allocated natural resources should work together to achieve economic reconstruction. This should be applicable to both short and medium-term relief and the long-term development.

For Gaza, partnership is a pre-requisite to poverty alleviation in particular and to sustainable urban development in general. Enhancing the poor people's socio-economical attitudes positively impacts all sustainable development components. Capacity

building can alleviate poverty through partnership in order to prepare the next generation of actors. Institutions should be the access which mediates people to the opportunities of capacities building and employment in order to alleviate poverty and promote livelihoods as well. Poverty alleviation projects have the risk that they may lead to skills lowering forming a continuous threat to the Gazan people. While the majority is educated, long queues of them are standing in front of the donors' organizations doors. They are looking to get higher salary jobs compared to other available jobs even they do not fit to their education and qualification. Therefore, this raises the importance of considering fair salaries reassessment and proper programming for the development activities. Experience in the rubble project revealed the need to set clear performance standards for employees and to state clear objectives at different levels of the organization. This will simultaneously result in respecting human dignity and establishing the balance between the real needs of development and the donors' requirements.

For the job creation programs, there is a need to be specially designed to target groups within a wider framework that fits the actual needs for the targeted community. Vocational training programs should be properly designed to the youth. This can be more cost effective by ensuring that programs are complemented with other services and tailored to the needs of local labor markets. For the sake of employment generation, proper utilization of intensive employment in construction projects can result in a significant increase in labor employment. This is recognized in light of the fact that smaller project sizes are more conducive to higher labor content. Limiting the size of the development project will encourage smaller contractors to get involved. This could be implemented in sectors that offer higher labor content. Reconstruction activities avail appropriate chances to create a great number of short-term job opportunities. A promising future could be foreseen in the young Gazan society with the high population growth rate to be positively hired in employment, to alleviate poverty and contribute in development.

This can direct development towards merging the self-reliant approach and the partnership to encourage independency by offering small projects. Empowering the existing local firms also allows for forming small ones to fulfill the community needs in reconstruction and development. This helps to minimize the effect of external intervention and conditional fund which could be of anti-development outcomes.

Mobility restrictions, as external factors, could be overcome when focus is turned to the internal

available resources. Dependency and political pressure are significant challenges to a real effective partnership in reconstruction and development in Gaza considering the unstable political environment and socio-economic retarding. A wider vision should be considered to bridge the gap between local and international communities for the sake of realistic development in order to meet the real challenges.

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