

**Urban Environmental Stewardship**  
**Nurturing urban environmental stewardship – a case study of Greenpoint,  
Brooklyn New York**

Master Thesis of Johanna Jelinek Boman  
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## **Abstract**

The benefits of engagement in civic ecology practices and stewardship of urban green space are increasingly recognized in supporting human health and well-being, providing ecosystem services in urban environments and enabling learning and interaction with local ecosystems.

There is still a lack in knowledge on how stewardship develops in urban landscapes and how it may be nurtured and supported. Retrieving additional knowledge on this subject will help guide policy and create institutional arrangements that enhance stewardship in order to strengthen its potential as an innovative force and community asset in improving local urban environments.

This exploratory study draws upon current research from the Stewardship Mapping Assessment Project (STEW-MAP) in New York and examines a case study of urban environmental stewardship in the neighborhood of Greenpoint, Brooklyn in New York City. It sets out to describe and analyze the structure and key roles of a network of stewardship groups and individuals, and further the role of a temporary fund that supports activities related to environmental improvements in Greenpoint.

Findings reveal a few core groups and individuals that are crucial for the local environmental community. The study also shows that connections to local politicians are an important component for these groups to achieve agency on a local level, and that an arrangement such as the studied fund can function to strengthen relationships among the local groups.

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## **List of acronyms**

CAP	Community Advisory Panel (for GCEF)
DEC	New York State Department of Environmental Conservation
EBP	Environmental Benefits Project
GCEF	Greenpoint Community Environmental Fund
GA	General Administrator (for GCEF)
NFWF	National Fish and Wildlife Foundation
NYS	New York State
NYS DEC	New York State Department of Environmental Conservation
NYC DEP	New York City Department of Environmental Protection
SES	Social ecological systems
UES	Urban Environmental Stewardship

## **List of acronyms of Stewardship groups mentioned**

BPP	Barge Park Pals
FBIP	Friends of Bushwick Inlet Park
GWAPP	Greenpoint Waterfront Association for Parks and Planning
GP COC	Greenpoint Chamber of Commerce
JAVA	Java Street Community Garden
MPNA	McGolrick Park Neighborhood Alliance
NBBC	North Brooklyn Boat Club
NCA	Newtown Creek Alliance
NCMC	Newtown Creek Monitoring Committee
NFWF	National Fish and Wildlife Foundation
OSA	Open Space Alliance for North Brooklyn

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## **1. Introduction**

### **1.1 General context**

Human activities are causing alterations and degradation of ecosystems, markedly known all around the world (Walker & Salt 2006). Cities are the places on the planet where these alterations of ecosystems become the most apparent. More than half of the world population currently lives in cities and estimates claim it will increase to two thirds by 2050 (UN 2014). This process of urbanization is expected to cause significant land use changes in foremost biodiversity rich areas which are located in proximity to already urbanized areas (CBO 2012). As a consequence cities are increasingly interconnected to and dependent on distant parts of the biosphere (Folke et al. 1997), resulting in a disproportionate environmental impact on distant ecosystems (ibid, CBO 2012.) However people living in urban areas are also dependent on the functions that local ecosystems provide, so called ecosystem services (ES), for their human well-being (Andersson et al. 2015). Such services can be better understood and managed when viewed as an outcome of social-ecological systems (Andersson et al. 2014), rather than just an outcome of ecosystems alone, since local stewards, e.g. local actors that care about and manage urban parks and other ecosystems, play an important role in managing the very systems that generates these services. Local stewards are rarely given credit for this role by management and land use-planning instances (ibid.; Colding et al. 2006; Ernstson et al. 2010) despite the fact that it often requires local knowledge and capacity to govern local ecosystems (CBO 2012), properties that local stewards and stewardship groups have shown to exhibit (Colding et al. 2006; Connolly et al. 2014b).

The potential of the different forms of stewardship are increasingly understood and recognized as crucial components in managing ecosystems. Stewardship of Swedish allotment gardens has shown to provide pockets of bio-cultural refugia, preserving practices and species diversity (Barthel et al. 2010). In New York there are examples of organizations advocating for massive cleanup of polluted sites (Campbell 2006) and access to open space, and in Bangalore networks of organizations and individuals are contributing to protecting and maintaining lakes and open space (Enqvist et al. 2014). There is however still a great lack of understanding of how stewardship develops in the urban landscape, and how it may usefully be nurtured and supported (Andersson et al. 2017; Bieling & Plieninger 2017). Retrieving additional knowledge on this subject could help guide policy and create institutional arrangements that enhance stewardship in order to strengthen its potential as an innovative force and asset in management of urban natural resource and in maintaining healthy and functioning urban ecosystems.

## 1.2 Aim and research questions

The purpose of this study is to gain understanding of how urban (environmental) stewardship can be nurtured by exploring what factors have a positive or negative impact on the ability of local stewardship groups to achieve their goals and reach their objectives. In particular this study focus on the temporary Greenpoint Community Environmental Fund (GCEF) set up between 2011 and 2015, supporting local stewardship activities with funding, and how the local network of stewardship in Greenpoint, Brooklyn in New York is influenced by the fund. In doing so this study should increase understanding of how stewardship can be nurtured and if and how a fund like GCEF can enhance the capacity of and bring to the table the needs of the local community.

Lack of sufficient public funding with city scale governance, has shown to initially spark civic stewardship. Examples are funding cuts in Berlin after Germany reunited and the fiscal crisis New York during the 70s, where civically engaged community members and groups started tending to green common spaces (Colding & Barthel 2013; Connolly et al. 2014). As responsibility grows and the tasks diversify, lack of sufficient funding has been identified as the highest barrier to civic and non-profit organizations in their strive to fulfill their goals and missions (Svendsen & Campbell 2008). This makes studying the perceived effects of a fund like GCEF particularly interesting since it might help these actors to overcome one of the largest hurdles in their work: sufficient funding.

The fieldwork of this thesis was carried out in New York where there has been extensive research on urban environmental stewardship (UES) over the last ten years (see e.g. Svendsen et al. 2016 (Svendsen & Campbell 2008a; Fisher et al. 2012; Connolly et al. 2013; Krasny et al. 2015; Krasny et al. 2014; Connolly et al. 2014). This thesis draws upon previous work of the STEW-MAP project (Svendsen et al. 2016) and additional current research that uses a social network perspective to study stewardship (Ernstson et al. 2008; Connolly et al. 2014; Andersson et al. 2017; Enqvist et al. 2014).

This thesis will be exploring the following questions:

**Q1:** What are the structure and key functions of the stewardship network and key actors in Greenpoint?

**Q2:** What is the role of the fund in the network and what are the ways it supports stewardship in Greenpoint?

## **2. Theoretical framework**

### **2.1 Urban social-ecological systems**

This thesis applies a social-ecological systems (SES) approach (Berkes & Folke 1998) to the case study of stewardship in the Greenpoint neighborhood in Brooklyn, New York City. SES are complex adaptive systems (Levin 1998) in which ecological and social systems interactions are internal and inevitably interlinked, ultimately shaping the properties of the system. In such systems, changes are expected to be non-linear and sometimes a result of SES interaction across multiple scales (Holling & Gunderson 2002). Using a SES approach means aiming at understanding how key social and ecological processes are shaping these systems, ultimately ensuring management that will secure long-term viability of ecosystems and their natural resources. Originally applied to the studies of natural resource management in primarily rural settings, and in communities at a much smaller scale than the ones of cities, the SES framework has later been used to also assess urban SES.

While exhibiting fundamentally different properties than rural SES (Andersson et al. 2014; Grove et al. 2015) cities too are examples of SES. Although widely diverse, cities do have some similar properties shaping ecological processes within these systems. They are characterized by fragmented patches of nature with high heterogeneity, in relation to the surrounding landscape (Andersson et al. 2014), and exposed to high population pressure resulting in an intense use of these small patches of nature, as well a subject to the conflicting interests that different people and actors have regarding how scarce urban land should be used (Grove et al. 2015; CBO 2012). Additionally cities are managed by a large number of different sectors with varying missions, agendas and institutional boundaries that does not necessarily align with the functioning of the ecosystems. Studies have revealed mismatches in the urban ecological systems functioning and the governance and management structures of these systems (Ernstson et al. 2010; Borgström et al. 2006), something that urban environmental stewardship could help remediate.

### **2.2 Stewardship in an urban context**

The concept of stewardship has been addressed and reviewed through several different approaches and the benefits to urban social-ecological systems of having civil society engaging in the management of green and blue urban space, known as urban environmental stewardship (UES) (e.g. Connolly et al. 2014) or civic ecology (Krasny et al. 2014), is starting to become widely recognized. Besides contributing to the local production of ES (Andersson et al. 2014) it is increasingly acknowledged in facilitating activities that support human health and well-being (Campbell & Weisen 2009; Colding & Barthel 2013). Current literature also addresses the importance of providing green space for stewardship within cities to enable learning and

interaction with local environments and ecosystems in urban landscapes (Miller 2005; Chapin et al. 2010) in order to help reconnect cities to the biosphere (Andersson et al. 2014; Folke et al. 2011). Additionally, at a community level stewardship activities tend to address not only environmental aspects but also engage in other community related issues and concerns such as education and community capacity building (Svendsen & Campbell 2008, Romolini et al. 2012).

Focusing on stewardship of urban nature this thesis uses a definition of UES provided by Connolly et al (2013), as civic organizations or groups that seeks to

*“conserve, manage, monitor, restore, advocate for, and educate the public about a wide range of issues related to sustaining the local environment”* (Connolly et al. 2013: 76)

UES is often motivated by issues related to “neighborhood level quality of life and preservation of local ecosystems” (Connolly et al. 2014: 187). It includes organizations groups and individuals working on a variety of different scales and type of sites.

Stewards of urban nature face fragmentation in terms of access to different resources that make it possible for people to be active stewards of these spaces (Andersson et al. 2017). Groups and actors often have access to different arenas and resources, such as access to knowledge, the political sphere, space, time or other resources. Consequently collaboration between these actors, aggregating different types of resources towards a specific objective, often becomes necessary. Urban stewardship networks can hence be usefully studied as a network that allows for the flow of resources that enables stewardship in urban settings (Andersson et al. 2017).

### **2.3 A social network approach to studying stewardship**

Social Network theory and methods (Wasserman & Faust 1994) have been increasingly used and promoted as a way to gain understanding of the social structures underlying the management and governance of natural resources and ecosystem services (e. g. Bodin & Crona 2009; Ernstson et al. 2008; Connolly et al. 2014).

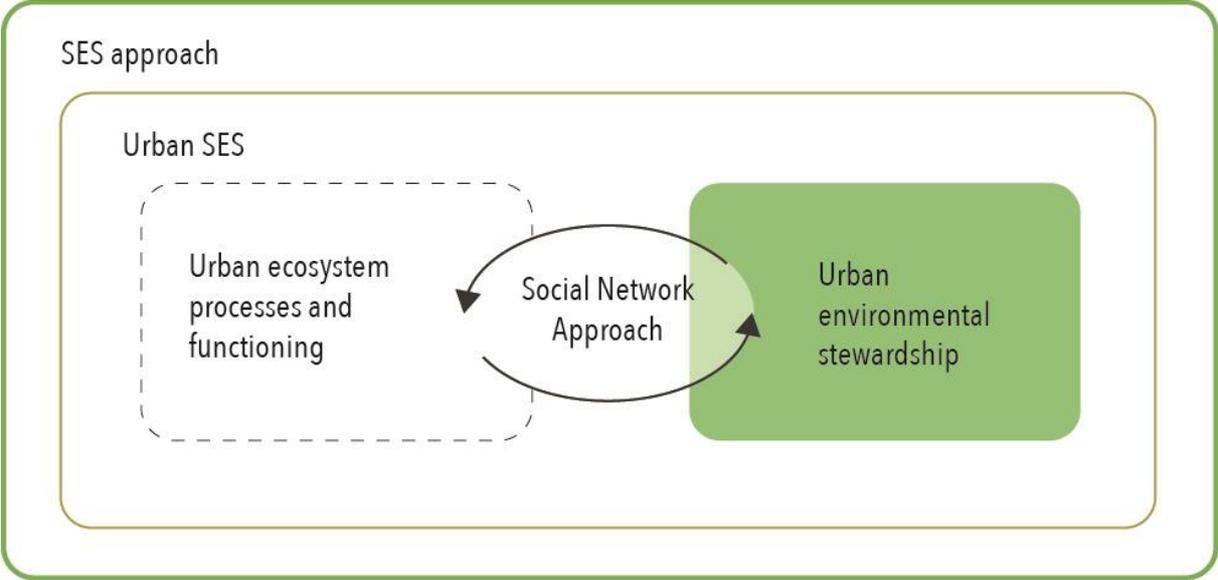
The institutions in place does not always match the ecosystems structures and functions that they are set up to govern (e.g. Borgström et al. 2006). Networks of civic groups and stewardship actors have been suggested as potential resource to draw upon when it comes to overcoming this mismatch. They exhibit a flexibility to adapt to changing ecological circumstances and ability to connect different actors across scales and sectors, sometimes lacking in current resource governance (Ernstson et al. 2010; Connolly et al. 2013; Andersson et al. 2014).

Social network analysis is used to display how different key units or actors, illustrated as nodes (junctions or circles), relate to each other via edges (links or lines). Edges tend to represent

some kind of relationship, positive or negative, collaboration, information exchange or other resources that flows between the nodes, making it a useful tool to explore and describe relations between different actors and the attributes of both those actors and the relations connecting them. Such analysis has previously been used to study structure and function of urban stewardship networks. Ernstson and colleagues (2008) explored the network structure of civil-society organizations engaged in protecting the Stockholm National Urban Garden, revealing a core-periphery structure of the network that both functioned as a facilitator and constraint to collaboration. A study by Enqvist and colleagues (2014) of a network of citizens in Bangalore also revealed a core-periphery structure, functioned as a platform for interaction between different interest groups on a city-wide level. In New York City network analysis has also been used to study stewardship networks at a city wide level, exploring how stewardship actors both complement and challenge the more formal governance and management of urban nature in the city (Connolly et al. 2014).

This project draws upon the Stewardship Mapping Assessment Project (STEW-MAP) project in New York (STEW-MAP 2016), a national research program of the USDA Forest Service. The project uses spatial mapping, social network analysis, and organizational surveys to add social information to the data on green infrastructure in New York, and a growing list of cities across the us and the globe. This thesis is adapting the STEW-MAP method to explore stewardship network on the neighborhood level.

This thesis uses social network analysis qualitatively. Network graphs are used to display findings and to visualize the structure of the ego-network of stewardship groups in Greenpoint. An ego network is a method used when the total number of nodes in a network is not known beforehand. Rather, many small networks, based around individual nodes are compiled into an ego network in which the edges between nodes are directed. This last point is useful to this study in its attempt to reveal the different flows of resources that enables UES. No in-depth analysis has been done regarding the structure and functions of the different groups in the network based on network theory, since interview data has not been retrieved from all of the groups identified in Greenpoint. The network diagrams should hence be viewed as descriptive visualizations that explore patterns in the flows of resources in the network.



*Figure 1. Showing the theoretical framing of the thesis*

### 3. Case study description

#### 3.1 The Greenpoint Neighborhood

Bounded by the Newtown Creek, separating Brooklyn from Queens to the north and east, the Brooklyn-Queens expressway to the southeast, McCarren Park to the south and East River to the west, the neighborhood of Greenpoint constitutes the most northern part of Brooklyn, New York. It was chosen as case study for several reasons, outlined in the sections below. The neighborhood hosts a population of almost 35.000 people according to census data from 2010.



**Figure 2.** Maps showing the location of the case study area of Greenpoint. Yellow line shows the area defined by the Zip code 11122, Red shows the area as defined by the GCEF and dashed lines showing the spatial elements that contributes to perceived boundaries of the area.

Just south of Greenpoint lies the neighborhood of Williamsburg. Together they make up Brooklyn Community District 1, inhabited by roughly 173 000 people (NYC DEP 2011). Sharing a lot of administrative services, the line between these two neighborhoods are somewhat blurred.

##### 3.1.1 Health hazards and social movements

The history of the neighborhood of Greenpoint includes severe environmental degradation and community mobilization against associated health hazards, as well as mobilization for the right to open space access and green amenities. The neighborhood has a long history of heavy industrial use, with oil refining companies beginning to settle around the creek in the 1850s, and still present. At the turn of the century gasoline and fuel oils were the main products stored or refined in Greenpoint industrial area. (DEC 2017). The waterway has been used as a dumping site not

only by the industries but also by the City of New York, which has been discharging untreated sewage water into the creek since the mid 1800s.

Apart from oil-related businesses Greenpoint is also host to a waste water treatment plant and a large number of waste transfer stations, causing extensive truck traffic in the neighborhood (Greenpoint 197-A Plan 1998). Consequently asthma rates of the Greenpoint and Williamsburg neighborhoods show numbers far above the city average. Additionally the neighborhood has been host to several incinerators and it still hosts Radiac, the only radioactive waste storage facility of the city. These activities have exposed the residents to a cocktail of environmental hazards, leading to a history of environmental activism and movements for environmental justice in the neighborhood (Curran and Hamilton 2012). Outcomes of these movements have been, for instance, the closing of the Greenpoint incinerator in 1994 and successfully fighting the construction of a new power plant on the East River waterfront in 2000. Today the residents of Greenpoint have moved from solely mobilizing against health hazards towards promoting and fighting for their right to green amenities (Campbell 2006). Additionally scarcity of open space is prevailing, Community District 1 having an open space ratio, open space per capita, far lower than both the city average and the borough average (Huang 2006).

On September 2, 1978 signs of oil seeping out into Newtown Creek were discovered by the US Coast Guard. The investigation that followed concluded that an estimate of 17-30 million gallons of oil had been seeping out into the creek and the surrounding grounds during several decades (DEC 2017). The spill turned out to be the largest one in New York state history and is the second largest in the history of the country. When the underground spill was rediscovered in 2002, by clean water advocacy organization Riverkeeper, little had actually been done about the spill (Curran & Hamilton 2012). This led Riverkeeper to suing ExxonMobil in 2004, followed by The Attorneys General's Office filing suit in 2007. A settlement between the City and ExxonMobil was reached in 2011 and Exxon was charged with cleanup of the oil plume and the surrounding area. In addition Exxon Mobile was charged with approximately 25 million dollars in "penalties, cost and improving the local environment" (OAG 2010).

In 2010, prior to the Exxon Settlement, the Environmental Protection Agency declared the Newtown Creek a Superfund Site (EPA 2017a), adding it to the Environmental Protection Agency's Superfund program, which is "responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills and natural disasters." (EPA 2017b), making the local waterway a matter of national and federal concern. This happened in part thanks to the collaboration between the local stewardship organization Newtown Creek Alliance and the clean water advocacy organization Riverkeeper (NCA 2016).

### **3.1.2. Demographics and gentrification**

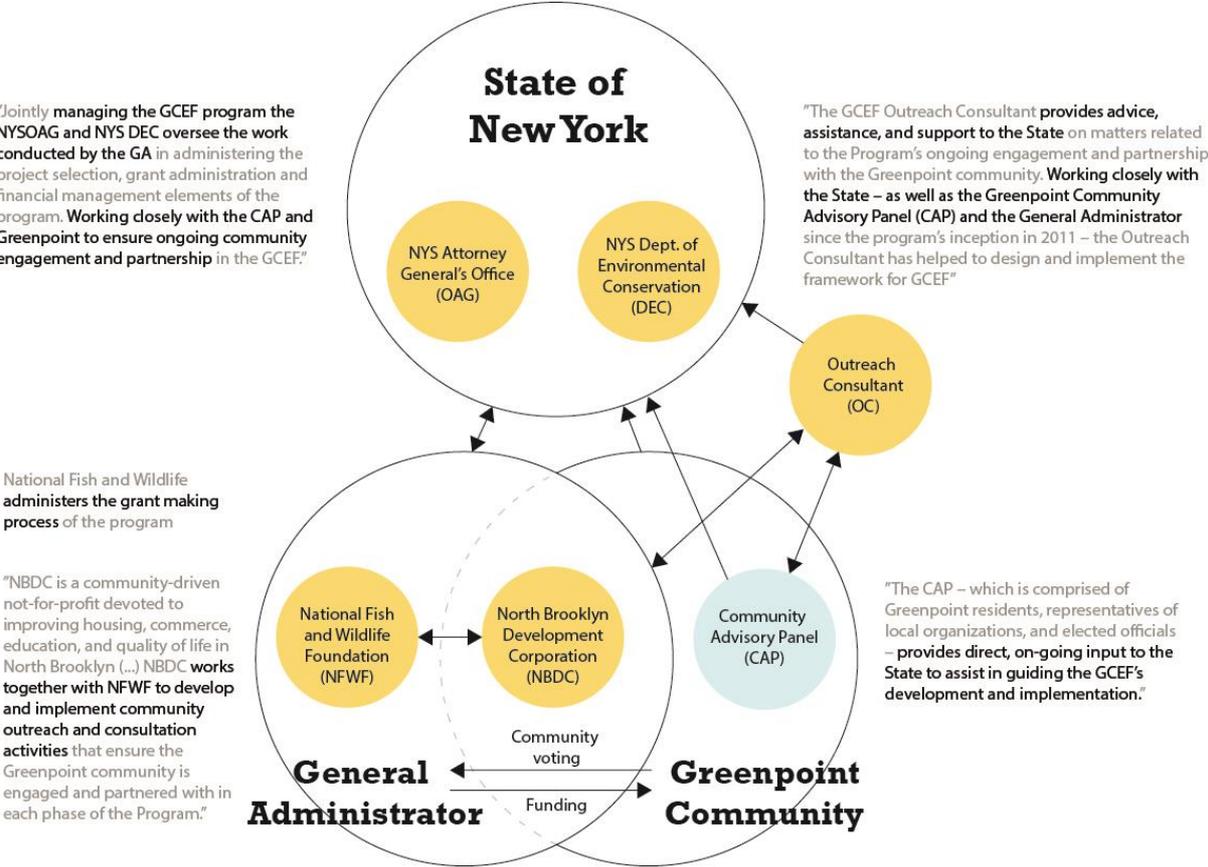
Because of its relatively isolated location, due to geographical boundaries and limited access to the subway system, the historically heavy industrial uses of the area and a socially close knit network resisting actors (Wolch et al. 2014) the gentrification process has been less rapid than other places of the city. Over the past couple of decades however Greenpoint has been and is still undergoing demographic changes as well as land use changes, both catalyzed largely by the 2005 rezoning of the waterfront in Greenpoint and Williamsburg (DCP 2017). The rezoning opened up for housing development on land previously assigned to industrial use and caused “an explosion of luxury apartment towers along the waterfront” (BIP 2016).

Already prior to the rezoning the traditionally working class and immigrant neighborhood of Greenpoint was experiencing demographic changes. New community residents, so called “gentrifiers”, and the oftentimes less affluent working class population tend to be divided by class and struggling for fundamentally different things (DeSena 2012). However a paper by Curran and Hamilton (2012) presents the environmental struggles of Greenpoint as an arena where these groups work together in joint efforts creating “actual sustainabilities”, versions of the green gentrification type of greening commonly associated with new development. According to Wolch et al. (2014) and Curran and Hamilton (2012) the neighborhood is an example of where environmental/green gentrification has been successfully fought by keeping the neighborhood “just green enough”, a process that “organises for cleanup and green space aimed at the existing working-class population and industrial land users, not at new development” (ibid 1028). They also emphasize the important character of the cross-class coalition, first wave gentrifiers and long-time residents working together, to achieve this alternative greening process.

### **3.2 Greenpoint Community Environmental Fund (GCEF)**

19,5 million dollars out of the 25 million dollar retrieved from Exxon Mobil in 2011 were allocated to an Environmental Benefits Project (EBP), the largest of its kind in the history of New York State, resulting in the Greenpoint Community Environmental Fund (GCEF), a temporary arrangement with the purpose of supporting “environmental projects that will benefit the Greenpoint Community” (OAG, 2010). This fund administered the grant making process, announcing the first grantees in March 2014 and the last ones in December 2015, and had prior to that been engaged in intense community dialogue, since the announcement of the settlement in 2011. An EBP is a model of New York State Department of Environmental Conservation (DEC) used to handling settlements involving retribution money. The ways in which such money is deployed in New York State traditionally follow this general EBP model (DEC 2005) (see section 3.3). The funds of GCEF however, were allocated to the community with the aim to “fund

projects that will address the Greenpoint community’s environmental priorities through a process that is open, transparent, and ensures ongoing engagement and partnership with the community.” (GCEF webpage, 2016). The arrangement allowed community representatives to take active part in shaping the criteria for what organizations could apply for administrating the grant and what type of projects and actors could apply for funding. It also resulted in a community voting process deciding on what projects to receive large scale granting. The direct grants of 16 800 000\$ retrieved was matched with 37 600 000\$ by partnering actors. It has supported a total of 40 projects through 46 different grants, and with those projects it has engaged 113 different organizations, businesses, universities and national-, state- and city agencies according to a review of the projects. Additionally seven different local schools are participating in multiple projects funded by GCEF. For a summary of projects and allocation of funds see Appendix 4.



**Figure 3.** The figure shows the cross scale institutional arrangement of GCEF. Adapted from GCEF-webpage, gceffund.org. In the lower left circle are the two grant administrators, the nationwide National Fish and Wildlife Federation and the local North Brooklyn Development Corporation, assisted by the Community Advisory Panel (lower left circle), both connected to NY State, overseeing the process.

### **3.3 Use of mitigation funding in NYC**

Cases in NYC where the community have been the active agents in demanding restitution and authority over how that money should be used are quite few and relatively new in the history of NYC (Interview December 16 2016). EBP resources will usually be allocated to one organization in charge of distributing the money to suitable projects. For instance in the case of Bronx River, the Attorney General's Office reached a settlement with the upstream Westchester municipalities in 2007 (OAG 2007) the restitution money was allocated to National Fish and Wildlife Foundation (NFWF), the largest conservation grantmaker in the US, with the power to decide how to distribute the money. Another EBP is The Newtown Creek Environmental Benefits Program, a settlement between NYS and NYC to upgrade the water treatment plant and provide benefits to the neighborhoods in Greenpoint and Queens bordering the creek. Documentation from GCEF shows that this previous EBP experience did not have the outcomes hoped for, and this time community members wanted to make sure the process was made transparent (CAP meeting notes, 2016). These two cases differ from how the EBP of GCEF was set up in that the community has been involved in shaping the criteria of organizations eligible as Grant Administrator, the criteria of organizations eligible for funding and criteria of projects eligible for funding (CAP meeting notes, 2016).

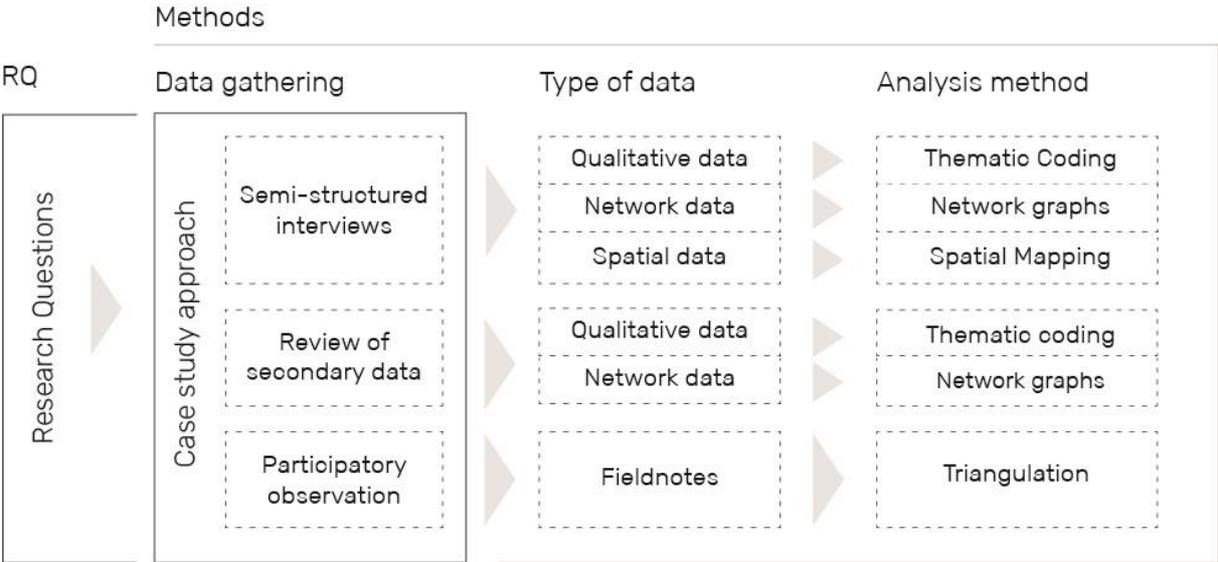
Besides the case of GCEF in Greenpoint there is one more recent example of a similar process, the Long Island City and Astoria neighborhood in Queens, north of Brooklyn (Castro-Cosío 2016). After a major power outage in western Queens in 2006 a local action group, Power for the People, started actively participating in the legal process to claim what they deemed to be an appropriate retribution from the responsible party ConEdison to the five neighborhoods affected. They received US\$ 7,9 million and decided to use it for green infrastructure improvement that would help regulate the local climate, a project called Greening Western Queens. In the case of Greenpoint and Western Queens the power over the use of that money has been moved all the way "down" to community level.

**4. Methods**

**4.1 Research Design**

This thesis builds upon the US Forest Service project STEW-MAP (Svendsen et al. 2016). The method is collecting both social network data and spatial data of where stewardship groups are working in the area along with organizational characteristics of the groups. This approach enables one to better understand where and how different types of UES are contributing to the functioning of ecosystems in urban contexts (idib) alongside city agencies and other natural resource managers.

This thesis uses a case study approach which typically involve several different methods and are preferably used when the research questions “seeks to explain some present circumstance, for instance how or why some social phenomenon work” (Yin 2014: 4). Three main methods, outlined in Figure 4 below, were used for collecting the data necessary for inquiry. Applying the case study method to explore the neighborhood-based initiatives of stewardship in Greenpoint, the survey methods of STEW-MAP (Svendsen et al. 2016) were adapted to fit an intensified case study at the neighborhood scale.



**Figure 4.** Showing data collection methods, data retrieved and the methods for analysis.

**4.2 Methods for data collection**

**4.2.1 Semi-Structured Interviews**

The main method for data collection was semi-structured interviews (Kvale 1996). Semi-structured interviewing is a flexible type of method and allows the researcher to expand on themes that might occur throughout the interview and probe for answers (Bryman 2012). While

originating from a qualitative approach to research the method allowed for collecting three kinds of data: qualitative data, network data and spatial data of the specific sites/areas in the neighborhood that the different groups were currently caring for. This method was chosen to be able to explore the relational characteristics behind the more quantitative network data.

The interviews, lasting for between 1-2 hours, were done with individuals from selected stewardship groups. An interview template (Appendix 6) based around four main themes guided the interviews: 1.) Goals and objectives of the group, 2.) Supporting/obstructive conditions, 3.) Collaborations, 4.) GCEF influence. This template was used as a checklist to allow for a rather open conversation while making sure the different themes were covered. The questions were phrased in a way as to generate network data, for illustrating the way that resources flow between the different groups and other actors. By bringing a list to the interviews of stated collaborative partners, retrieved from secondary data from the webpages of the different groups, the essence of the specific collaborative relationships were corroborated, illustrated as edges between the nodes.

By bringing a map to the meetings information on where the groups were working generated spatial data of stewardship. This was done to explore if and how the physically fragmented pieces of nature are connected through the social network of actors.

#### **4.2.2 Identifying stewardship groups and organizations in Greenpoint**

To gain an initial understanding of the landscape of stewardship groups in Greenpoint, two sources of secondary data, STEW-MAP of NYC from 2007 (USDA Forest Service) and the the GCEF webpage, listing all funded projects with lead actor and partnering actors for each project (GCEF, 2016) were used to compile a list of stewardship groups and organizations based in Greenpoint. These sources were chosen for the comprehensive and up to date information they were able to provide on groups and actors involved in stewardship in Greenpoint. The groups were compiled into a list and crosschecked for duplicates. Since the thesis seeks to explore the network of civic stewardship in Greenpoint three criteria needed to be met by the groups to be included in the list:

- 1.) Groups based in Greenpoint
- 2.) Civic groups and organizations
- 3.) Groups consisting of 2 or more people, single individuals were removed

A local source working intensively in natural resource management in the neighborhood helped confirm and comment on the groups/organizations, adding missing ones and removing those that were no longer in operation. This list of local stewardship groups and organizations added up to 17, meeting the criteria listed above.

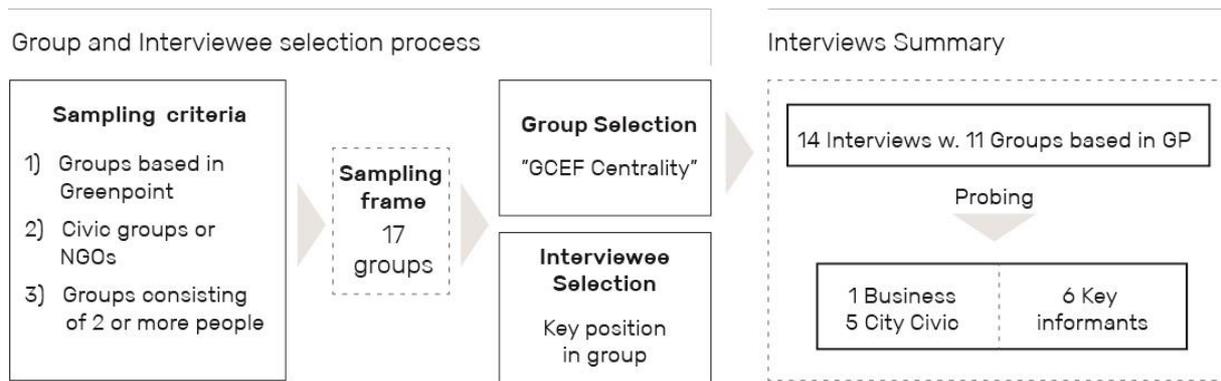
### **4.2.3 Group selection criteria**

To prioritize among the 17 groups and find starting points to carry out the interview the groups in lead position in one or several of the GCEF projects, or involved as partner in a large number of GCEF projects, were contacted first. These groups were assumed to have a more prominent role in the environmental community in Greenpoint due to the fact that most GCEF projects involve a large number of collaborative partners, groups and organizations. This assumption guided the outreach process and those groups were prioritized, hoping that they would provide data that would give the most complete picture possible of the Greenpoint stewardship network. During the interviews I continuously probed the sample to check for missing groups/organizations. If interviewees mentioned groups or actors that had so far not been included in the list of local stewardship actors they were added, if criteria were met. If such a group or organization was mentioned at least two times by different interviewees they would be contacted for an interview. All initial outreach was done via email to the group or organization email found at the organization webpage or via the group facebook page, or through in person meetings when attending community events or meetings.

A total of 14 interviews were made with interviewees representing 11 of the 17 groups, depending on access. These 11 groups/organizations represent some of the most important actors in the environmental community of Greenpoint today.

### **4.2.4 Interviewee selection criteria**

The interviews (n 14) were done with representatives with a key role in the groups, defined as having a leading position within the organization. These representatives were identified through either the webpages or facebook pages of the groups and organizations, and also by continuously asking the interviewees for the right person to talk to in interviews with other organizations. Probing for other important actors in the interviews resulted in interviewing an additional five city-scale NGOs, one business, and a representative of a local community college. Interviews with six different key informants were also done on the basis of information from the interviews with the local group representatives. These were either Greenpoint community members key to the environmental community, local politicians or agency officials, that could help deepen the understanding of the topic.



**Figure 5:** Showing the selection process and number of groups and organizations interviewed

#### 4.2.5 Online review and Participatory observation

Throughout the fieldwork I did a continuous online review of secondary data (Appendix 3) consisting of on-line available material about the GCEF-fund and the different organizations that had been identified.

To triangulate the information retrieved through the interviews I did participant observation (Bryman 2012), taking part in informal conversations and formal community meetings, community- and stewardship events. This was done in order to gain a broader understanding of the Greenpoint community in large and the cultural context that the community of UES is situated in. Field notes were kept in a field diary throughout the process to keep track on any emerging themes or salient findings that could later guide the coding process of the data gathered during the interviews, as recommended by Braun & Clarke (2006), resulting in 33 pages of field notes. I attended a total of nine different community meetings and events in Greenpoint (Appendix 7).

#### 4.4 Data analysis methods

Before analysis the interviews were recorded and transcribed, resulting in 214 pages of transcribed material, and later coded in AtlasTi. Notes taken from participant observation was also coded and used as a guiding tool in the coding process of the interviews. The primary approach for coding was deductive, meaning that I was looking for predefined themes according to the interview template. However if themes occurred that was not already predefined they would be coded inductively.

Network graphs were created using Gephi, an open source software used for illustrating social network structures. In these graphs groups/organizations are represented as nodes, and stated relationships from interview data are shown as linkages/edges. These graphs are used to interpret patterns and themes qualitatively and to triangulate findings.

#### **4.5 Ethics and confidentiality**

Before the fieldwork was initiated the study went through an ethical review. Participation in interviews was voluntary and confidential and every interview was initiated with a process of informed consent. Anonymity was taken into consideration on request from the interviewee.

## 5. Results

The results section is divided into four parts. First, a section that presents general findings from the interviews. Second comes a section that addresses the structural properties of the stewardship network in Greenpoint. The functional properties of the network structure are presented in the third section and the last section addresses how the GCEF fund has influenced the network of stewardship groups in Greenpoint.

### 5.1 General findings

I found 17 Greenpoint-based groups currently active in the neighborhood. They vary in age, size and focus. The environmental injustices that the neighborhoods of North Brooklyn have suffered has had an impact on how the different groups now active in Greenpoint have evolved, see timeline, Appendix 1. Several of them were created in response to the different environmental hazards of the neighborhood. These 17 groups are the most established ones in the neighborhood today.

The groups can be categorized into three different categories: **Core groups** - larger formal organizations, often concerned with the Greenpoint or North Brooklyn area at-large and born out of the environmental injustices of the neighborhood; **smaller**, often site-specific more informal groups; **and burgeoning groups**, in the process of being started, often thanks to GCEF-funding. These groups and organizations take on a variety of different tasks and areas of focus. One set of groups, Newtown Creek Alliance, North Brooklyn Boat Club and the neighboring La Guardia Community College focus on the restoration of the local waterway Newtown Creek. Another of the core groups, OSA, function as an umbrella organization for the different friends-of-park groups in Greenpoint and an additional couple of groups, Greenpoint Waterfront Association for Parks and Planning and Neighbors Allied for Good Growth, are primarily dedicated to advocating for an equitable and just development of the waterfront, and to educate about the environmental hazards still present in the neighborhood. For an overview of the groups in Greenpoint and their main focus see, Table 1.

	<b>Core Greenpoint groups</b>	<b>Founded</b>	<b>Type</b>	<b>Summary of main focus</b>
I	NAG – Neighbors Allied for Good Growth	1994	NFP	Advocating for <b>environmentally just</b> , sustainable and <b>equitable waterfront development</b> in Greenpoint and Williamsburg. Mapping and disseminating information about <b>environmental hazards</b> in the neighborhood. Conducting workshops on community related health hazards, working with local restaurants on <b>waste reduction</b> .
I	GWAPP – Greenpoint Waterfront Association for Parks and Planning	2000	NFP	<b>Open space advocacy</b> for mainly park and <b>public access on the Greenpoint waterfront</b> . Advocating, communicating and educating on what goes on regarding development and waterfront/open space access in the neighborhood.
I	NCA - Newtown Creek Alliance	2002	NFP	Working to restore, reveal and revitalize Newtown Creek. <b>Water quality and public water access. Environmental education</b> , providing opportunities for hands on <b>community engagement</b> .
I	OSA – Open Space Alliance for North Brooklyn	2003	NFP	Improve, maintain, activate, enhance, and <b>expand green space</b> in the whole of north Brooklyn area. <b>Promoting civic stewardship by activating parks</b> through programming and arranging community park events and coordinating groups of community members to care for neighborhood parks.
I	NBBC – North Brooklyn Boat Club	2010	NFP	Primarily <b>recreational boating</b> but also advocating for water access and performing <b>environmental education</b> related to water quality and the state of Newtown Creek. Crucial for enabling other groups and actors in the neighborhood, such as NCA, to access the water.

	<b>Site Specific GP groups</b>	<b>Founded</b>	<b>Type</b>	<b>Summary of main focus</b>
I	BPP – Barge park pals	1994	Civic	Maintain and improve the Greenpoint Playground and Newtown Barge Playground, known as Barge Park. <b>Expand the park, create waterfront access</b> and toilet facilities adjacent to the park
I	FBIP – Friends of Bushwick Inlet Park	2009	Civic	<b>Open space advocacy</b> . Realizing, protecting and serving Bushwick Inlet Park. FBIP have been doing advocacy, campaigns and community outreach to influence the decision of New York City officials to realize the park.
I	Java Street Community Garden	2011	Civic	Establish a garden and contribute to public space for the larger Greenpoint area. Develop the space into a place for learning about design and gardening.
	Newtown Creek Superfund Community Advisory Group (CAG)	2012	NFP	Serve to facilitate discussion, share information and if possible build consensus regarding decisions made concerning the Newtown Creek Superfund site.
I	MPNA – Mc Golrick Park neighborhood Alliance	2013	NFP	Improve McGolrick park and the neighborhood. Function as an “inclusive and equity-aware, focused, vocal, fundraising advocate for a safer and ultimately better park and surrounding area for all New-Yorkers to enjoy”
	61 Franklin Street Community Garden	2013	Civic	Community gardening and open space access
	GCF - Good.Clean.Fun	2015	Civic	Creating community around through park cleanup programming at McCarren Park. Encourage people to a new perspective on service in their neighborhoods.

I	Greenpoint Chamber of Commerce	2015	Coalition	Lead in the GCEF funded project Curb your litter aiming at organizing cleanup-days in Greenpoint and developing tools and methods to tackle the problem with litter on Greenpoint streets.
	Greenpoint Monitor Museum	1996	Civic	Lead in the GCEF funded project Greenpoint Monitor Museum Park, engaged with developing a design for the waterfront area of the future museum
	YMCA Greenpoint Branch	(1906)	NFP	Lead in
	Town Square	2005	NFP	Provides the Greenpoint community with an online platform for stewardship and environmental news
	OUTRAGE	1991	Civic	Long time present organization on Greenpoint and Williamsburg engaged with decreasing the presence of waste transfer stations and adjoining truck traffic in North Brooklyn
	<b>Potentially burgeoning groups</b>	<b>Founded</b>	<b>Type</b>	
	Greening Greenpoint Network	(2015)	Civic	-
	Friends of WNYC Transmitter park (FOTP)	(2016)	Civic	-
	Friends of Greenpoint Playground	-	Civic	-
	Friends of American Playground	-	Civic	-
	Friends of McCarren Park	-	Civic	-

**Table 1.** Showing the identified civic stewardship groups/organizatoins in Greenpoint. Based on First hand data from interviews and secondary data from group webpages and facebook-group pages. An “I” in the left column indicates that the group/organization was interviewed or not. The years in brackets means the year is uncertain and the dash means that the group is officially not yet created.

**5.1.1 Stewardship as a prerequisite for a healthy urban nature**

Common for almost all of these groups is their assumption that putting more people in contact with nature and educating them about the local conditions is going to have a reinforcing effect on the involvement and care for the local nature, and sequentially result in healthier nature.

A representative from OSA, the larger park conservancy organization in Greenpoint says:

*“what we do think helps a park is having a whole series of social and arts activities, health and wellness, education. So having story time, how to ride a bike, runs, movie-nights. **Activating** the parks, think we, is the best way to use the limited resources that we have.”*

The quote below reflects the perceived necessity of having an engaged local community to tend to the care of trees in order to maintain the local benefits that a healthy urban forest provides.

*“I think both the stewardship component and the masterplan are both tasks that contribute to the first goal to making trees healthier and improving the physical environment in the neighborhood. I wouldn’t say one is more important than the other but stewarding trees and creating a community around trees and creating this masterplan... the underlying purpose is really to make our lives more liveable and healthy through the services that trees provide.”*

This is ultimately shown in the type of projects that has received funding, Appendix 4, where many of them include some type of component of community engagement or environmental education.



**Figure 6.** Tree stewardship event with local schools in McCarren Park in Greenpoint. Photo by the author.

### **5.1.2 Stewardship as a means to reach social goals**

Equally salient is the emphasis on the expected social outcomes of stewardship. For several of the groups in Greenpoint, engaging residents in caring for the local environment is seen as a means for also building increased community capacity and strengthening social relationships in the neighborhood. For that reason it seems to be a goal equally important to that of improving local natural conditions. A representative from one of the larger organizations stated that the focus of their work is directed towards engaging people socially in the parks rather than focusing on maintaining them.

*“It is civic engagement. You meet your neighbors [...] You take advantage of the social network for knowledge and resources. You become involved in a sense that suddenly find out that YOU can call your city council person or your council member [...] you find out that you can make changes. You can get money allocated for your park or you find out that there are other issues in the community that you can engage on. So it creates real personal benefits but also civic benefits,”*

The above quote illustrates an attempt to not only foster connection between local citizens but also to familiarize more people with how to navigate the local political landscape and facilitate personal connections to local politicians in order to be able to shape the conditions and different aspects of their neighborhood. On the note on connecting local residents to each other, an interviewee representing another smaller park conservancy group expressed a similar ambition of the group saying that:

*“we're hoping to have a couple of kind of cultivation events, just to get people together as a neighborhood [...] because there are so many new people in the neighborhood and they are young and you know. So if we could be a resource for them, we figured would try to have something little social event.”*

## **5.2 Key structure of the stewardship network of Greenpoint**

### **5.2.1 One network – and two isolates**

This study reveals one network of stewardship groups and organizations in Greenpoint and two isolated groups, see Figure 7. It is tightly knit, in part thanks to the fact that a number of key individuals in Greenpoint are engaged in several of the core groups at the same time (see 5.2.3).

### 5.2.2 Three categories of civic stewardship groups

The groups that were identified throughout this project (table 1) have been categorized into three categories:

- 1) Core groups
- 2) Site- / project-specific groups
- 3) Burgeoning/potential future groups – as an outcome of GCEF

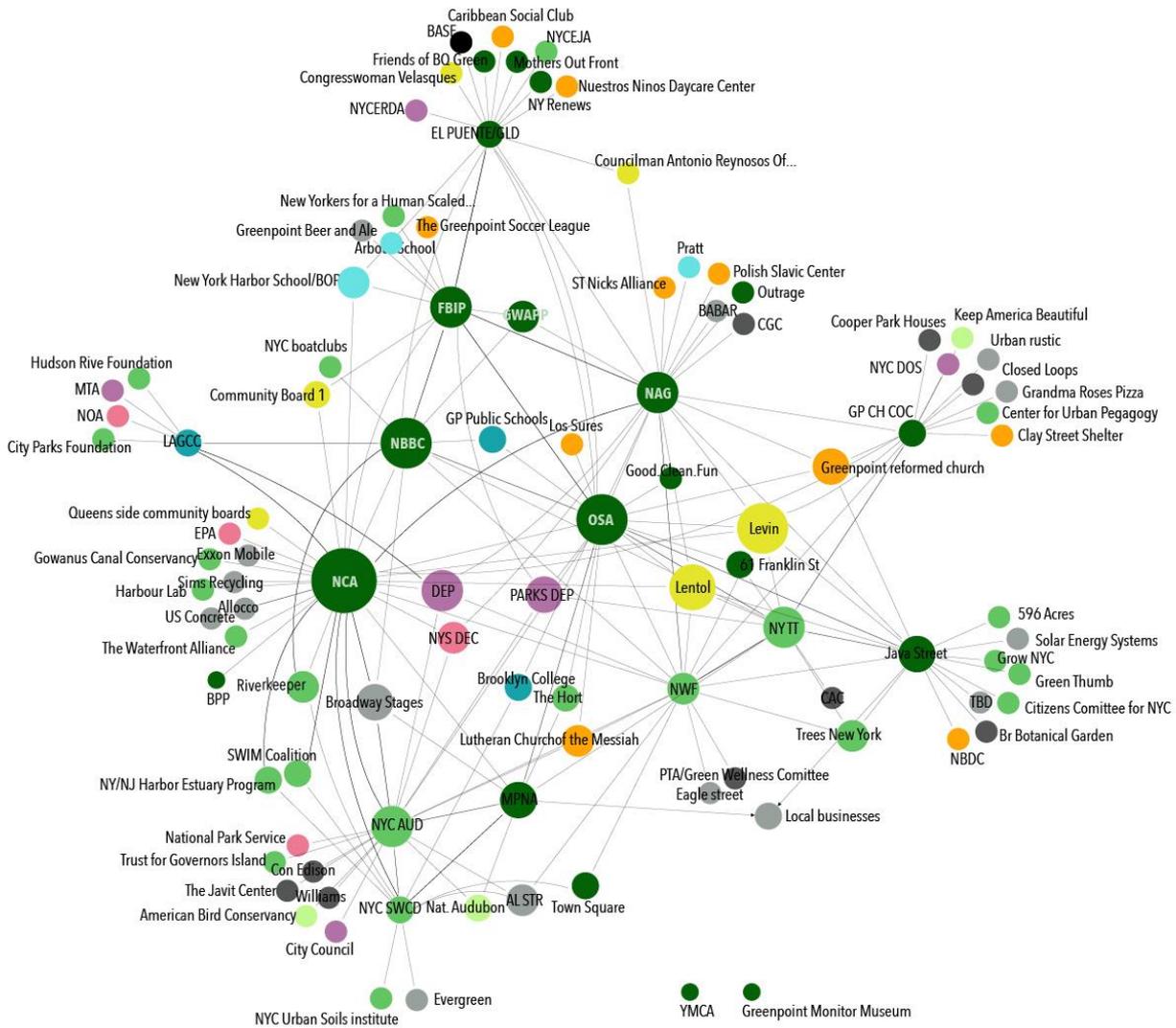
5 groups were defined as key, core groups, to the environmental work in the neighborhood, making up the spine of the Greenpoint stewardship community. These core groups tend to focus on serving the Greenpoint, or even North Brooklyn (Greenpoint and Williamsburg) area at large. They were identified as important to the neighborhood prior to the interviews through secondary data, however interviews and network graphs functioned to enhance and triangulate this finding. These groups are long-time established organizations in the North Brooklyn area. Three of them were born out of the struggles that the citizens of Greenpoint and Williamsburg have been forced to fight to keep additional environmental hazards out of the area, and get rid of the existing ones, illustrated by one of the key informants who says that:

*“this community, and the organizations, are born around the basic environmental problems”<sup>X</sup>.*

The core groups, (see Table 1, and more in detail in Appendix 2), are each performing various functions and pressing different issues. While specialized in different types of main topics these groups tend to exchange support and advocacy, sometimes speaking as one voice for the environmental Greenpoint community in large. These groups also play a big role in the different GCEF projects as either lead organization or partnering organization (Appendix 4).

**The smaller groups** tend to have a more narrow focus and be more site- or project-specific. These groups are civic, less formal groups, operating on a volunteer basis. These smaller groups mainly focus on open space advocacy, park conservation, community gardening, environmental education and waste reduction. These smaller groups are often connected to the larger organizations through fiscal sponsorship, meaning that a core group is responsible for the financial affairs of the smaller groups. Here we also find more established organizations but less anchored within the environmental community of the neighborhood. Examples are YMCA and Greenpoint Chamber of Commerce, who are both involved in a GCEF project, but whose focus is not primarily environmental.

**Burgeoning/potential future groups:** This category consists of groups that have been enabled by the different projects of GCEF, further discussed in section 5.4.3.



LEVEL	TYPE	Civic	Political	School/Uni	Agency	Priv/Bus	Community	Size indicating in-degree
Local		Dark Green	Yellow	Light Blue	Grey	Orange		Small to Large Grey Circles
City		Light Green		Light Blue	Purple	Dark Grey		
State/Nat		Lightest Green			Pink			

**Figure 7:** This figure displays the ego network of the stewardship groups in Greenpoint. It is based on primary data from the interviews. Colors represent type of actor and shade represents at what spatial level the actor is operating within. The size of the nodes indicates number of times a group is mentioned by another group as collaborator.

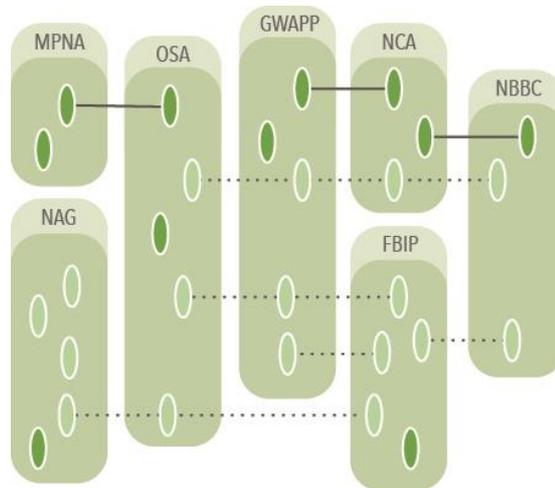
### 5.2.3 Group overlap due to individual engagement

The interviews revealed a rather small core group of people that play an important role for the environmental work in the neighborhood. The engagement from these key individuals, playing an active part in several of the groups at the same time, creates an overlap among the core groups, see Figure 8. Several people are active within 2-4 different groups or organizations and those names came up during the interviews as important people in the “green community” of the neighborhood. These people make up a core group of individual actors within the stewardship network. Interviewees from both core organizations and the smaller civic groups noted this as both a benefit and a restraint. An interviewee from one of the core groups said:

*“There are a lot of overlap between the different groups both when it comes to people and somewhat also the issues that the different groups are dealing with and where they work. It is good in some ways but it might also risk creating a bad image”*

Confirmed also by representatives from the smaller groups, saying for instance:

*“It’s very insular, because there is a lot of overlap. [...] But there is a saying “If you want something done you ask the busiest person you know” because those are just the people who do stuff. So you constantly try to bring in new people but unless they are go getters...”*



**Figure 8.** This figure shows how five of the core groups and two additional groups in Greenpoint overlap through individual engagement by the different individuals that were mentioned during the interviews as key to the environmental work in Greenpoint. All green ovals represent key individuals mentioned during the interviews, and triangulated through secondary data from the group webpages. Ovals connected by either full or dotted lines indicates that this is the same person involved in those groups where the ovals are positioned. A full line between dots means that that person itself has confirmed the engagement in the groups. Dotted line between the green ovals means that an interviewee has mentioned that other person.

One interviewee who has been involved in the environmental work in Greenpoint for a long time says that having this group of individuals within the core groups of the Greenpoint network makes important information travel faster, and can hence reach a larger amount of people faster. The interviewee further noted that this makes it possible to mobilize a lot of people quickly if needed, but on the other hand might work as a restraint in bringing new perspectives and energy to these groups, giving the impression of a rather closed group of people. However a representative of a younger group in the neighborhood, and a more recent addition to the environmental community, don't view this as a problem:

*"I think that if you are doing like good work in that field in the neighborhood there is like a mutual respect, so I don't think it's all that difficult really to... it's not like it's some exclusive group of people or something you know. I think that it's pretty open, it's not like it's some secret. I think it's just like anything, you start showing up and you start proving to people that you are invested in something, and that's what happens."*

### **5.3 Key functions of the stewardship network in Greenpoint**

#### **5.3.1 Legitimacy and credibility**

The smaller groups experience increased legitimacy in collaborating with the core groups, based on the interviews with representatives from the core groups themselves, as well as with the smaller groups. Core groups' long-time presence in the neighborhood make them important nodes for distributing information and the smaller groups collaborating with them say that it gives them credibility and extended reach. For instance one interviewee from a smaller local group involved in a recently implemented project funded by GCEF states that:

*"OSA is an important partner because they have been working in the neighborhood for a lot of years, so they have a lot of connections and a lot of, like history of environmental activism and we can kind of use that to our advantage when reaching out to the community and especially because we are a new project that people hadn't heard of before."*

These groups also function as a bridge between government agencies, communicating information from the agencies to the community that might be hard to understand. Additional resources that the groups are exchanging are summarized in Appendix 5.

### 5.3.2 Community coalition building

The core groups also function as a spine when it comes to advocacy; sometimes these groups speak as one voice when it comes to community-related issues. One interviewee, representing a smaller open space group in the neighborhood described how the group had just signed a letter of support, together with a number of other community groups, supporting Friends of Bushwick Inlet Park in their cause for completing Bushwick Inlet Park, a park that was promised to the neighborhood by the City of New York in 2005. A key individual from that park advocacy group, asking for the support, spoke of the importance of that letter:

*“For instance when we had the letter that we needed to send to people, they [the local groups] have different interests but some overlapping, but they represent a significant part of the population, a certain kind of activist or engaged people, so we are very fortunate that we can say that they are helping us and they represent a lot of power... kind of, in our little neighborhood.”*

This ten-year long struggle over the last piece of land completing Bushwick Inlet Park finally ended in December of 2016 in favor of the neighborhood. During a community meeting on December 17 2016, announcing and celebrating the acquisition of the final piece of land for the park, Congresswoman Carolyn Maloney said:

*“let me tell you there is nothing better in life as a elected official, as having the community behind you in something you are doing. The only thing better is if they are in front of you and leading the way and that is what this community did. This community led the way.”*

On the same note, indicating that the smaller groups aspire to build such coalitions, an interviewee from one of the smaller open space groups stated:

*“I started to show up at events, because I wanted other advocacy groups to know who we are and what we were doing, so that if our space was threatened, you know they would support us, just like we are now supporting [them]... that was the hope, to become part of a larger community, and become part of a larger effort of environmental stewardship in the neighborhood.”*

### **5.3.3 Personal relations matter**

#### **- for Civic – Civic collaborations and partnerships**

A lot of the relationships, collaborations and exchange of resources between the different local groups and organizations are happening thanks to personal connections. An interviewee states that for several of the partnerships of that group, it is mostly about just knowing people and simply “being friends”. Another interviewee from one of the core groups elaborates on the same theme as following:

*“Those [collaborations] are like relations, I mean it's really up to the people that are leading these organizations to come together and do collaborative projects together.”*

Another representative of one of the core groups in the neighborhood strengthen this viewpoint:

*“One day we support them in the next they support us. [...] With a lot of these things you can be something so punctual and small, like the other day I bumped into someone from NAG, just doing small talk [...] and it's stuff like that that also feed these alliances these partnerships too.”*

#### **- for Civic – Agency collaborations**

Personal relations matter in the connections to city agencies too. The interviewee from the local La Guardia Community College (LAGCC) explains how the wetland reconstruction on Newtown Creek would not have been possible without the specific engagement from a DEP employee. This relationship later resulted in a partnership on a GCEF grant:

*“It only happened because community and local government participation. [...] But if it hadn't been for the real interest and commitment in partnership by [a representative] (from DEP) with us, this would not have happened.”*

On the question of what factors have a positive effect on the ability of the group to reach its goal an interviewee from one of the core groups answered:

*“It's the knowledge of the agencies and how they work and the relationship that you build over the time with the agencies [...] for instance, [a local steward] sees something happening on the creek and he can pick up a call and to call directly, and they will come in and they will check, right. Because they know that when he is*

*reporting something it's an actual breaking of the law it's not just anything because he has been trained in doing it. [...] It's that kind of relationship that I think helps to get to where you want to get, where agencies actually looks at you and says hey these guys really know what they're talking about, we need to listen."*

The quotes above illustrate how building trust between the people in the community, with long-term presence and knowledge about the local conditions, and the employees of the agencies seems key to the collaboration that occurs between the agencies and the local community groups.

In the same way lack of trust or personal relationship between agency officials and stewardship representatives can also be a hurdle, illustrated by the quote below. The same interviewee says the following about challenges they face in reaching their goal as an organization:

*"The challenges [that this group face in achieving their goals] are also the same people [agency representatives] actually, it's the agencies when you think about it. [...] It takes a lot to explain [to someone] and to show them that this [perceived health hazard] is not good for us. I think that it all depends on who's in the agency."*

#### **- for Civic – Local businesses, religious entities and community organizations collaborations**

The smaller groups in the neighborhood tend to be younger and more site-specific. These groups report, to a larger extent than the larger more formalized organizations, that access to meeting space, and help to arrange fundraisers and various in-kind donations such as food, materials or volunteer hours, are ways in which they collaborate with local businesses, religious units and other community organizations. As the quote below demonstrates these too often takes an interpersonal character.

*"For instance those solar panel [that were installed at the community garden] were donated by local solar energy company here, based here in Greenpoint. That was a relationship that another steering committee member had and we followed through and made it happen, and the owner of the company who lives in Greenpoint his company is based in Greenpoint and he attended some of these community events with his family."*

#### **5.3.4 The role of local elected officials in the network**

There are two elected officials that the groups mention as important collaborative actors in their work: City Council member Stephen Levin, and State Assemblyman Joe Lentol. Support from these local politicians seems important for primarily three reasons. First: as a source of funding, in

part through the recently implemented process of Participatory Budgeting that the City Council representative administers. Participatory Budgeting allows local politicians to set aside parts of their budget for community members to decide how they want to spend the money. When it comes to the assemblyman, he is able to mobilize financial support to the local groups from the state level. This reveals how the state representative can channel state resources to the local level of the neighborhood and potentially also raise the profile of the neighborhood organizations with the city government through the imprimatur of state support.

Second: local politicians and their staff/office function as nodes of information, making up an important link between the groups and the rest of the community. Through their newsletters and other channels they communicate news and information, helping these groups and organizations to advertise what events and meetings are taking place in the neighborhood and what opportunities there are to volunteer or engage. They can also function as a connector in more specific issues. One interviewee described how the office of one of the elected officials in Greenpoint would direct concerned citizens to that group if the concern was of a matter that that group had the mandate to solve or help with. On the question of what was contributing to the success of one or the smaller groups, an interviewee answered following:

*"In the beginning very heavy involvement of the local electeds, especially Joe Lentol who is our [state] assembly member, so he sits on the state assembly from our district, and he was instrumental. He has a really great record in terms of environmental issues [...] He thought that the park needed good neighbors to take care of it. And he was one of the founders essentially of the group and he always makes a point of coming to visit when we are having an event. He is kind of like a force behind which people can rally. So that was definitely crucial."*

Another interviewee representing one of the smaller groups in Greenpoint stated that:

*"And of course our local council member Steve Levin has been supportive of the garden always. Assemblymember Joe Lentol is supporting the garden [...] so I think all of these things help."*

Third, local politicians make up important links to political arenas that these civic groups and organizations do not necessarily have access to otherwise. The same interviewee explains further:

*“They oftentimes will contact different agencies on behalf of neighbors, constituents and private persons even to solve a problem or to ask... and they do the same for us. They are just good to have on our side and these particular ones are really environmentally friendly, if I can put it that way. They administer programs that give funding and also they are just our... it's kind of written into their statute so to speak, they are a connection to the big government”*

Another example of this is the role that the local officials played in getting the City of New York to buy the last piece of land needed for Bushwick Inlet Park mentioned earlier. Rallying with the community and showing their support, as well as pleading the cause of the community and the park to decision makers in city hall and with the NYC mayor clearly contributed to the city's decision to buy the last piece of land needed for the park. A representative from Friends of Bushwick Inlet Park explains:

*“So what we ended up doing is we got resolution from the community board saying they would never approve a rezoning, then we had a letter signed by all the elected officials saying they would never consent to a rezoning, this was always meant to be a public park, it's just always been in the plan, and then Mayor de Blasio surprisingly enough last January, he even said that he would never go against the councilmen and the community and say it could be rezoned, and that was huge.”*

Rezoning in this context refers to reassigning a piece of land with a new purpose (see Case Study Description). This is done by the New York City Department of Planning. In this case, the group feared the purpose of that property would be reassigned to housing instead of open space/park, as it was zoned to in 2005.

Local elected officials speak on the behalf of the local communities in a wide variety of issues. The offices of the neighborhoods city council representative and the assemblyman constitutes two local political units representing, amongst other areas, Greenpoint, on the ground, engaging with the local community makes them suited to advocate on community issues an causes in political arenas that might be out of range for local environmental units. According to several interviewees both of these local elected officials live in Greenpoint. This fact might contribute to the close collaboration between the environmental community of Greenpoint and the elected officials.

**5.4 GCEF impact**

The GCEF funding has enabled the local groups to carry out projects that correlate with their individual focus. As such, the different projects can be viewed as stewardship activities that these groups take on to advance their work (see Appendix 4)

The grant administrators and the way that the GCEF process played out in large received a lot of appreciation in the interviews. However several of the interviewees was careful to note that there was already a preexisting network of environmentally aware actors, groups and individuals in the neighborhood, before the fund came along, and that a lot of the credit for the perceived success of the way that the GCEF-process played out should also go to this community network. Key in the GCEF was the creation of the CAP, consisting of dedicated community members with a lot of prior experience in working with agencies and voicing the public opinion of local residents. The ability of these Greenpoint residents to insert themselves early on in the process of setting up the fund, and establish this panel had a huge impact on the way that the GCEF fund was set up and carried out according to interviews with key informants. Several of the individuals found in the core network of groups and individuals described in section 5.2.3 are also members of the CAP. The CAP helped shape the criteria for selection of grant administrator (NFWF and NBDC), the criteria for eligibility to apply for funding and for the types of project eligible for funding. They had an equally important role in shaping the process of community voting that ultimately decided which projects would be implemented in the community. The CAP were however not involved in the process of selecting the projects to receive grants or for the preference voting process (CAP meeting notes). Besides financial resources, several of the groups are reporting additional benefits from having GCEF present in the neighborhood over the past five years, presented below.



*Figure 9. Java Street Community Garden, one of the GCEF grantees. Photo by the author.*

#### **5.4.1 Success breeds success**

Several of the smaller groups state that GCEF has helped them gain a larger sense of legitimization and refer to the fact that success breeds success. A representative from one of the site specific park-groups said that:

*“Success breeds success, so when you can say that we got this money for the playground, we got all this GCEF money... People like to give to people who are successful. They don't like to give to a group who hasn't been able to do anything. They like to give to a group who has done something, and we have, those are achievements.”*

A representative with a leading role in Java Street Community garden said that GCEF raised the prominence and visibility of the group:

*“We're being known at the GCEF web page, it has helped us to like formalize our role as environmental stewards [...] you know we're starting to be part of the, we get recognition I guess through GCEF and that's nice because we don't really have, we don't have a website, we are little bit.. we're not really set up that way yet to have formal documentation or like to be part of this other group of Stewards. So I think GCEF has formalized that a bit.”*

#### **5.4.2 Expanded and more formalized network**

A majority of the interviewees state that they have experienced that their group's network has expanded thanks to the fund and that many of their previous collaborations have become more formalized. An interviewee from one of the smaller groups explains how the grant administrators in a very direct way connected their group to other potential grantees:

*“The first Grant Round, the NFWF told us that we did such a great job writing our grant applications that they used it as an example for other groups. So I had several groups reach out to me on the second round for help with their application or to talk things through. So that was like one way a very direct kind of result.”*

The above quote show how GCEF in a very hands-on way helped connect certain groups to each other during the application period in order to build capacity and knowledge across the network. However, the strict focus on just one neighborhood also risks causing fragmentation from

surrounding areas. While this interviewee, with a key role in one of the core local groups, mentions how the fund has increasingly connected the group to other Greenpoint based groups and to the local schools, it has also caused them to work less with neighboring communities.

*“It has definitely connected us more to Greenpoint groups, that has been great. And some of the schools, but on the other hand, because it's only Greenpoint focused... you know, doing stuff in [neighboring neighborhoods] has been less of a priority in the past two years”*

Additionally, almost all interviewees report some kind of relationship or collaboration with at least one group that is not stated in the official documentation from GCEF, but that has occurred as an outcome of GCEF. This reveals a more spontaneous and organic type of connections and collaborations between the local groups that have occurred by drawing on common goals to maximize the effect of the funding and to make best use the available financial and social resources.

#### **5.4.3 Incubating groups and piloting methods**

The financial support from the fund has provided opportunities to incubate, meaning facilitating the creation of, stewardship groups and to pilot new methods of community engagement. Especially groups and organizations affiliated with the NYC Parks Department express goals to incubate new groups in Greenpoint. NY Tree Trust, with their project Greening Greenpoint and OSA running the project Greenpoint Parks Community Stewardship Program are examples of organization aiming at just that. Both of these efforts might be interpreted as somewhat top-down considering that they are closely linked to the NYC Parks Department. However, these activities are both funded by the GCEF, and came into being through the voting process described in the introduction, meaning that they are ultimately a result of the community's preferences. One interviewee expressed hope that the project and social structure it creates will outlive the official project-period:

*“By engaging the Community Advisory Committee [local group of community members] in this process we kind of hope they will sort of be the keepers of the plan and be the ones checking in making sure it's happening and also just building connections between people who are interested in trees and advocacy over these three years [...] creating ties between all the people in the neighborhood who care about*

*trees through our programming and hoping that that will create this certain network of stewards that will outlive the granting period.”*

As a program of the NYC Parks Department the interviewee from NY Tree Trust explained that the opportunity that arose with the GCEF fund was seen as a chance to pilot this way of engaging the local community in caring for the neighborhood trees in a more holistic way:

*”people in the Tree Trust and the Parks Department saw this funding and the neighborhood of Greenpoint as a real opportunity to really transform the urban forest at a neighborhood level and rather than just... you know we have a massive tree planting program with the NYC Parks Department we are really interested in engaging communities and increasing stewardship having that be a component of what we do. So this funding was really an opportunity to pilot that in a neighborhood and really kind of plant trees and care for trees in a much more holistic thoughtful way.”*

On the same topic an interviewee from OSA explained what they hope the work with their project Greenpoint Parks Community Stewardship Program will generate:

*“We hope that those two spaces [American Playground and Greenpoint Playground] can have like a volunteer crew and hopefully also some leadership will emerge, it usually does in situations like that, people who can lead the effort to either coordinate volunteers for events or advocate for the park, attend workshops and kind of bring back more information to the neighborhood [...] you know the city is so rich in all sorts of classes, free programs, talks at different museums and libraries. So you know we need to get people to go to those things and expand their knowledge.”*

Additionally one of the key interviewees mentioned how the fund itself, if not created, then at least functioned as a catalyst for one of the groups in the neighborhood.

*“Interestingly enough the group that's from [a local park] was sparked by GCEF. [...] they started inserting themselves in this whole process which was great, and that group is existing right now and it's going forward and hopefully the group will continue to go forward.”*

The fund has also enabled organizations not previously involved in stewardship activities to engage in projects and hence become a part of the local community of environmental improvements. One such example is the Greenpoint Chamber of Commerce, running the GCEF funded project Curb Your Litter, YMCA and their two projects directed towards environmental education and Greenpoint Monitor Museum working with a design plan for parts of the East River waterfront.

#### **5.4.4 Attracting new actors to the neighborhood – a win-win situation**

Through the projects it funded, the GCEF fund has brought in actors to the neighborhood that were previously not engaged in practice the area. Examples of these are the city-wide organizations of NYC Audubon Society and NYC Soil and Water Conservation District. Getting involved in the projects in Greenpoint happened in differing ways. The interviewee from NYC Audubon society reveals a more informal way of partnering with the local groups:

*“There were some members in Greenpoint before the project, there are more now since the project. But it wasn't a destination for us in terms of doing bird work until this project happened, until the GCEF stuff came up [...] a member of our board of directors lives in Greenpoint [...] because [that person] was on our board when this GCEF program came to be, this organization was very aware of it as a result of that connection. How do you hear about something like that if you're not located there?”*

As the above quote shows, their engagement in Greenpoint also helped NYC Audubon society to expand their member-base. As for NYC Soil and Conservation District, the fund also played a more active and formal part in connecting local groups with more formalized organizations, to help them level their capacity. A representative from NYC Soil and Water Conservation District describes how the grant administrators contacted the organization and asked them partner with one of the local groups:

*“[They] called me one day a couple of years ago I guess and said "We have this community group in Greenpoint, they want to apply for GCEF, but are having a hard time, could you please help them? I said ok I'll go meet with them, So I met with McGolrick Park Neighborhood alliance, that was the group. And it's a totally volunteer grassroots organization, they do amazing work, but because they are all volunteers they have limited human resources.”*

And on further questions on how this has impacted their work the interviewee continued:

*“We have expanded into Greenpoint, we didn’t really have a direct connection to Greenpoint before this. So that’s a new territory so to speak that we are expanding into and Newtown Creek is one of the most polluted waterways but also it has really strong stewardship people, so it’s a pretty exciting place to be involved in.”*

#### **5.4.5 Pathways forward for stewardship in Greenpoint in the face of neighborhood transitions**

Several of the interviewees expressed that they currently find their group/organization in a transitional stage, perceived as both a challenge and an opportunity. The need to formalize and institutionalize the processes and groups that has gained momentum thanks to the GCEF is apparent, and important to maintain the capacity that has been built up during the GCEF-granting period. A representative from MPNA says:

*“We were lucky, I think we hit it [GCEF and other funding opportunities] at the right time. But it was great because it’s created this activist park group [...] but the next step of the group is to try to institutionalized itself, I mean the goal would be ultimately that there should be a little conservancy of its own, independently or maybe under the umbrella of the OSA.”*

Several of the groups also mention the challenges that come with operating in a neighborhood that is in itself in a transitional stage. This relates to the process of gentrification that the neighborhood is going through.

*“The other problem is that this neighborhood is still very transitory in terms of all of the young people that are moving in, then they move out again, you know. [...] So when all the money has been spent how much will be left behind in terms of any institutional structures or individuals? I think there will be a drop of. I think it won’t be complete but it won’t be quite as active as it is now.”*

Another interviewee from one of the “friends-of-park”-groups says:

*“We have been surprised by the lack of engagement by the... some of the residents in [pointing to the high rises] and we don’t know if they are just transient or if they are just in their tower and couldn’t care less about what is going on. The engagement*

*seems to be down on a ground level thing, long-term residents or people that are off on their little community streets.”*

Finding strategies to engage the newcomers, both young people, and families, is one of the challenges for the stewardship organizations, according to an interviewee from one of the larger groups.

*“There are a lot of young people moving to GP right now as the neighborhood is gentrifying [...] they are sort of in a transient position and so I think they are a big group of really creative exited people with a lot of energy who could be a great resource”*

An additional demographic group that several interviewees mentioned they wish to approach more in the future is the Polish community.

*“There’s a really big Polish community in Greenpoint and we’ve definitely been working on engaging that community but I think we could do even more to specifically work with them on this program.”*

Several of the interviewees touch upon the fact that gentrification brings more economic capital and affluent people to the area. With the development pressure that the gentrification creates comes increasing pressure to actually clean up the area and remove toxic waste and pollution, often referred to as green/environmental gentrification (Gould & Lewis 2012) . However, as noted by one of the interviewees, it should not be a matter of choosing between a non-gentrified polluted state of a place and a gentrified cleaned up one.



**Figure 10.** Newtown creek wildflower roof, realized in part by GCEF funding and much thanks to contribution from a local company. Exposing the juxtapose between urban nature and the industrial character of Greenpoint

## **Opinions on GCEF**

Acknowledging that a lot of good has come out of the fund some of the interviewees say that they had hoped for a more long-term perspective of the fund, that it would have been turned into a trust with more long-term aspirations rather than the three-year period that the funded projects are supposed to be executed within. Relating to this are the expressed concern with what will happen after the granting period and how the capital that has been built up in the neighborhood during these years will be managed in the future, see 5.4.5.

Additionally an interviewee from one of the core groups there were project suggestions that would deal with actually cleaning up sites along the creek from pollution. These were rejected for the legal liabilities related to such projects. According to this interviewee this has instead resulted in more “light weight projects”.

## **6. Discussion**

This section begins with a summary of findings followed by a discussion on methods. It continues by discussing the findings of this study and relating to existing literature.

### **6.1 Summary of findings**

The history of Greenpoint, characterized by the many environmental dis-amenities located in the neighborhood, has had influenced the creation of stewardship groups/organizations. Key findings from this study show a structure of the stewardship network in Greenpoint that is characterized by a number of core groups focusing their work on the Greenpoint area at large. These groups are older and more formalized than the smaller younger groups, with a more narrow and often site-specific focus. The study further reveals how the core groups overlap through a number of individuals, important to the environmental work in the neighborhood, making information spread faster and helping mobilize efforts quickly (RQ1). Additionally a salient finding is the important role played by the local elected officials, as both a source of funding but also for disseminating information about activities of the groups and opportunities for volunteering, and advocating for and working closely with these groups in order to resonate their ambitions (RQ1).

The success of GCEF had a lot to do with the ability of the preexisting stewardship network in Greenpoint to insert itself into the development of the fund structure and processes early on. By providing a platform of stewardship in the community, GCEF helped strengthen and formalize the collaborations and relationships between the different groups of the neighborhood as well as leveraging the capacity of these local groups by bringing in new collaborative actors from mainly city-wide scale but also a few nationwide actors (RQ2). This happened much thanks to how the fund was set up; requiring sufficient capacity from grantees to administer some of the large-scale projects, which in turn often required smaller groups to partner with more formal and larger organizations, and also facilitating those connections. Additionally the funding generated further collaborations besides the ones stated in the GCEF documents, indicating a wider outcome of the fund than the formal documents show, indicating that there are additional benefits to be gained from such arrangements.

Future pathways for the stewardship community of Greenpoint involves taking action for institutionalizing the processes, collaborations and new groups that has been enabled much thanks to the GCEF, as well as navigating the dynamics of a local neighborhood context that is undergoing demographic changes.

## **6.2 Discussion of methods**

There is a risk that some groups or individuals who perceive themselves as members of this Greenpoint network of stewards might have been omitted since the area of study was bounded to the GCEF definition of Greenpoint neighborhood. Additionally, since the thesis is assessing groups involved in any of the GCEF projects, and other groups identified during the interviews, there might be a potential bias due to the fact that groups were selected for interviewees based on their assumed connections to other local groups.

This project certainly raised questions on who/what type of group or organization is a steward and who is not and there is an additional risk that some groups who perceive themselves as environmental stewards have been omitted. A couple of organizations in Greenpoint, previously not concerned primarily with the local environment received funding from GCEF to carry out a project. Does receiving granting from the GCEF for a project immediately make the group/organization a steward? Local organizations such as YMCA, Greenpoint Chamber of commerce and the Greenpoint Monitor Museum do not have an apparent focus on local environment but rather seem to have, with GCEF funding, expanded in that direction. Future will tell if this focus will stick with these groups and if they in future assessments will have established themselves within the environmental community of the neighborhood. These groups were included in the list of local stewardship groups, but only one of them were mentioned by other interviewees throughout the fieldwork. Additionally how do we treat companies/businesses with a great sense of social or community responsibility? Are they only to be categorized as enablers of stewardship or is there a point where their actions show that they function in a hybrid manner, spanning business and civic sectors?

How well represented a group is by one individual has been contested, which is why this method was also supplemented with a review of secondary data and participatory observations. However organizations do not act, the individuals of that organization do, which is why the method is accepted. Additionally, in cases where an interviewee could not sufficiently answer the interview questions a second interviewee from the same group would be interviewed.

## **6.3 Discussion of findings**

Previous studies of stewardship networks, both of networks of organizations and networks of individuals, have revealed similar structures to the one found in Greenpoint to be of importance for the function of the network (Ernstson et al. 2008; Enqvist et al. 2014). Such structures, called core-periphery structures turned out to be crucial in a study by Ernstson et al. (2008) for developing methods to prevent construction and development in an urban nature area in

Stockholm. Such structures also support efficient communication and spread of information throughout the network (Enqvist et al. 2014) as well as helping to facilitate action (Bodin et al. 2006).

Connolly et al (2014) describe how local stewardship organizations have moved from opposing public government towards becoming specialists in environmental management. OSA and NY Tree Trust, both affiliated with NYC Parks Department to create such groups of specialists resonate with those findings and even seem to take it one step further. OSA's Greenpoint Parks Community Stewardship Program is helping to form new groups to tend to different parks and nature in Greenpoint and the NY Tree Trust, educating local community members on tree pruning and developing a neighborhood community forestry master plan, hoping to form a network of tree-stewards in Greenpoint. These efforts have a lot of similarities to the "catalyst" model, used in Greening Western Queens (Castro 2016). This model, developed by the NYC Parks Department and Partnership for Parks, is designed to "build community engagement and prioritizing community-based tree plantings, b) connecting people ideas and efforts to identify common goals, and c) sustaining local leadership and stewardship of green space" (Castro 2016).

Drawing on the local knowledge of these type of neighborhood networks could potentially help address the lack of attention on city-scale and landscape networks of green infrastructure (Ernstson et al. 2010; Andersson et al. 2017). These local stewardship networks provide a potential in developing a landscape approach to the management of urban landscapes and ecosystems as a whole (Andersson et al. 2017). Coordination of urban landscape features could be done through this network of actors, and might be made easier if the groups in it are well connected to each other, making transition costs lower. For instance, requests could be made, from agencies to this network to contribute with certain features to the site they are stewarding to combine and foster adaptive co-management (Olsson et al. 2004), citizen science and urban environmental stewardship. An additional necessity of such management is trust between actors (Hahn et al. 2006). In Greenpoint this is reflected in the importance of the personal relationships between actors from civic, public, business and school sectors for achieving collaboration and action.

The framework by Ernstson et al. (2010), combines ecological scales with social network structure to further advance theory on adaptive governance (Folke et al. 2005). The almost unison opinion on the importance of the local elected officials within the stewardship network of Greenpoint suggests a perceived fit between the local political institutional structures and the stewardship network of Greenpoint. It would be useful to further explore this local political

structure and the institutional arrangements that underpin the relationship to the stewardship groups to advance understanding what local political structures can function to support these groups. In her classic book *The Death And Life of Great American Cities* (Jacobs 2016: 121) , Jane Jacobs suggests that there are certain functional scales within the city, of which the district (in this thesis referred to as neighborhood) is one:

*“The chief function of a successful district is to mediate between the indispensable, but inherently politically powerless, street neighborhoods, and the inherently powerful city as a whole.”*

In functional terms, according to Jacobs, these districts have to be large enough to count in the context of the city as a whole and “big and powerful enough to fight city hall” (Jacobs, 2016: 122). Hence, such districts vary in size depending on the size of the city but need to be housing 100.000 people or more, when speaking of large cities as New York. The districts of Greenpoint and Williamsburg seem to be one example of where this structure is actually showing such functionality. Reflected in the victories that these communities have seen in fighting disamenities and acquiring the restitution money from the settlement, resulting in the GCEF. A more recent case is the acquisition by the city of the last piece of land for a 27-acre waterfront park, Bushwick Inlet Park. A ten year community struggle worthy of a study in it’s own. At the meeting and press conference on December 17, 2016 announcing the acquisition (FBIP, 2017) Congresswoman Carolyn Maloney said:

*“It’s rare in public life that you can work for something that is absolutely pure, that you can reach out and touch the sky and know that what you are working on is so righteous and wonderful such as creating this park. And the mayor said that it wasn’t cheap and I would say that it is priceless [...] let me tell you there is nothing better in life as a elected official, as having the community behind you in something you are doing. The only thing better is if they are in front of you and leading the way and that is what this community did. This community led the way. And we wanna thank the mayor for keeping the promise, not a promise that he made but a promise by a prior administration.”*

### **GCEF - interacting with pre-existing Greenpoint stewardship network**

Interviewees have been careful to point out that there was already an existing network of groups and engaged individual in place before GCEF fund was initiated, previously also addressed by

Curran and Hamilton (2012) and Campbell (2006). The ability of the core network of key individuals to insert themselves in the GCEF process early on, creating the CAP. Ultimately demanding transparency and a community voting process was important for anchoring the projects within the neighborhood to infuse a sense of ownership of the different projects with the local residents. With their long-term presence in the neighborhood these individuals have knowledge about the local environmental conditions but maybe more importantly knowledge on how to navigate the political landscape and the bureaucratic landscape of mainly the different city and state agencies. The role that this network played in shaping the GCEF process relates to theories of shadow networks in the transformation literature (Olsson et al. 2006) where preexisting actors and social structures can take advantage of an opportunity to shape processes that can bridge different scales of governance and contribute to increased co-management of natural resources.

### **GCEF – A cross-scale institutional arrangement and bridging organization**

The arrangement of GCEF is an arrangement spanning across institutional levels, connecting the residents and stakeholders of Greenpoint with the NY State Agencies that are responsible for managing the grant money retrieved from the settlement with Exxon Mobil, a global corporation. GCEF links top-down methods of using restitution money with the knowledge and capacity of bottom-up knowledge and new ideas on how to best make use of such resources and anchoring it within the community. The arrangement was not set up with the intent to solve a particular matter of a specific ecosystem, but rather to serve the needs and desires of the Greenpoint community, through a process of preference voting by the local residents. GCEF has provided local groups with a platform for communicating efforts and joining forces regarding environmental issues and local UES. The temporary arrangement of the GCEF fund displays properties much like a bridging organization. Such organizations are “designed to facilitate collaboration and knowledge coproduction” (Crona & Parker 2012). During the granting period the fund has played a facilitating role in connecting different actors across scales and sectors, both vertically and horizontally, and has functioned as a catalyst for several of the groups in Greenpoint to expand their network across spatial and institutional boundaries. This is bringing in more groups and organizations, with their expertise and knowledge, into the environmental work in Greenpoint, and increases the opportunities for the local groups to retrieve future funding.

The groups also reported increased collaboration with citywide groups, an outcome of the way that the fund was set up. To apply for larger grants the fund required fiscal sponsors and organizational capacity to manage projects of the budget size in question and project of those

scales. This required larger more formalized and experienced organizations to partner with, often found on a city scale level with the ability to jointly leverage the capacity together with the local groups.

While the documents of GCEF provides clear reports on the different partners of each project, the interviews with the group representatives reveals a much richer picture of different important collaborative partners are (see 5.3.2) and what constitutes the essence of their individual relationships. These spontaneous civic-civic collaborations have occurred by drawing on common goals to maximize the effect of the funding and use the available financial and social resources. Almost all interviewees report some kind of relationship or collaboration with at least one group that is not stated in the official documentation from GCEF, but ultimately an outcome of the fund, meaning that there are more benefits to an arrangement like this than first meets the eye.

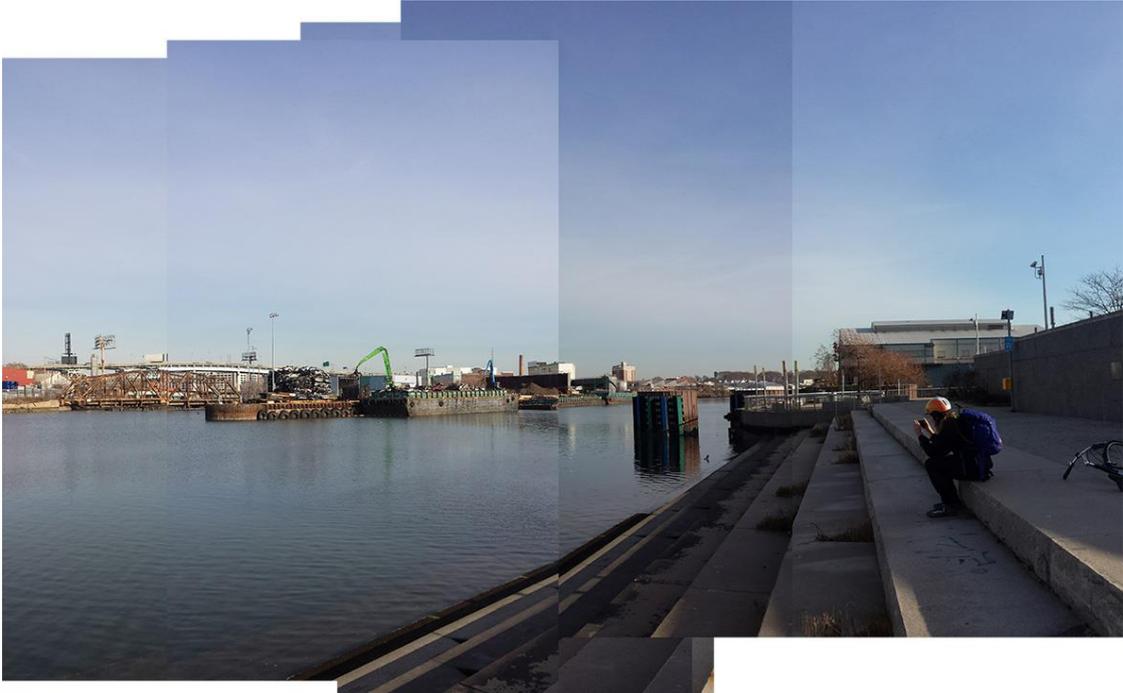
Besides the more formal collaborations and partnerships there are those of the very local and personal connections that benefit the groups at large. Financial contributions, in-kind donations from local businesses, legal assistance, as well as access to meeting space and storage space made available by local religious groups and other community-based associations or businesses are examples of resources that are made available to these groups from within the neighborhood. These “soft resources” that flow between the groups and the community contribute to strengthening the capacity of these local stewardship groups. This reflects a relationship between the local civic stewardship groups and businesses that does not always show in large scale studies of stewardship networks (Svendsen & Campbell 2008). This finding is particularly salient for the smaller, younger groups and might hence be an important way for them in getting sufficient resources and community support in the early stages of establishing such a group. The suggested framework by Andersson et al. (2017) could preferably be used for gaining a better understanding the flow of such resources and if and how they support UES.

There is a need to transform urban green management to secure the wide array of benefits that urban nature provides. Whether the GCEF will contribute to fundamentally changing the management of natural resources in Greenpoint is too early to tell. However this study shows that anchoring such management within local neighborhoods by providing a platform for environmental education and a stewardship discourse has contributed to strengthen the connections and collaborative effort within the landscape of stewardship in Greenpoint. Such arrangements could contribute to further developing a landscape approach to managing urban nature resources. Returning to the neighborhood in a few years to make a second mapping of the

stewardship network structure and function could help explore the more long term effects of arrangements like GCEF, and how it can further be built upon.

**7. Conclusion**

This study shows that at this moment in time, the stewardship groups and organizations in Greenpoint make up a close-knit network of groups and actors. This study suggests that a temporary arrangement such as the GCEF fund can function as a bridging organization, facilitating connections across scales as well as horizontally within a neighborhood, and can formalize relationships and collaborations that existed previous to the fund. A key question is if and how the network might change after the grant runs out and this platform for stewardship disappears, a concern that several of the interviewees expressed. Returning in a few years, when the project period is over, to see in what ways this network might have changed and how many of the local groups, both established and those “in incubation”, are still active would be interesting to further evaluate the effect of a fund like GCEF. Whether and how these groups manage to institutionalize themselves would be further interesting to explore. This would add to understanding of whether an arrangement like GCEF could be a model useful for nurturing urban environmental stewardship. In turn, the GCEF process has drawn on the capacity and knowledge of the local community and developed new tools and methods that can inform similar processes in the future.



*Figure 11. The Nature Walk in Greenpoint, facing Newtown Creek and the businesses on the other side of the water in Queens, where the machines seems no longer machines, but rather some sort of slow moving urban animal.*

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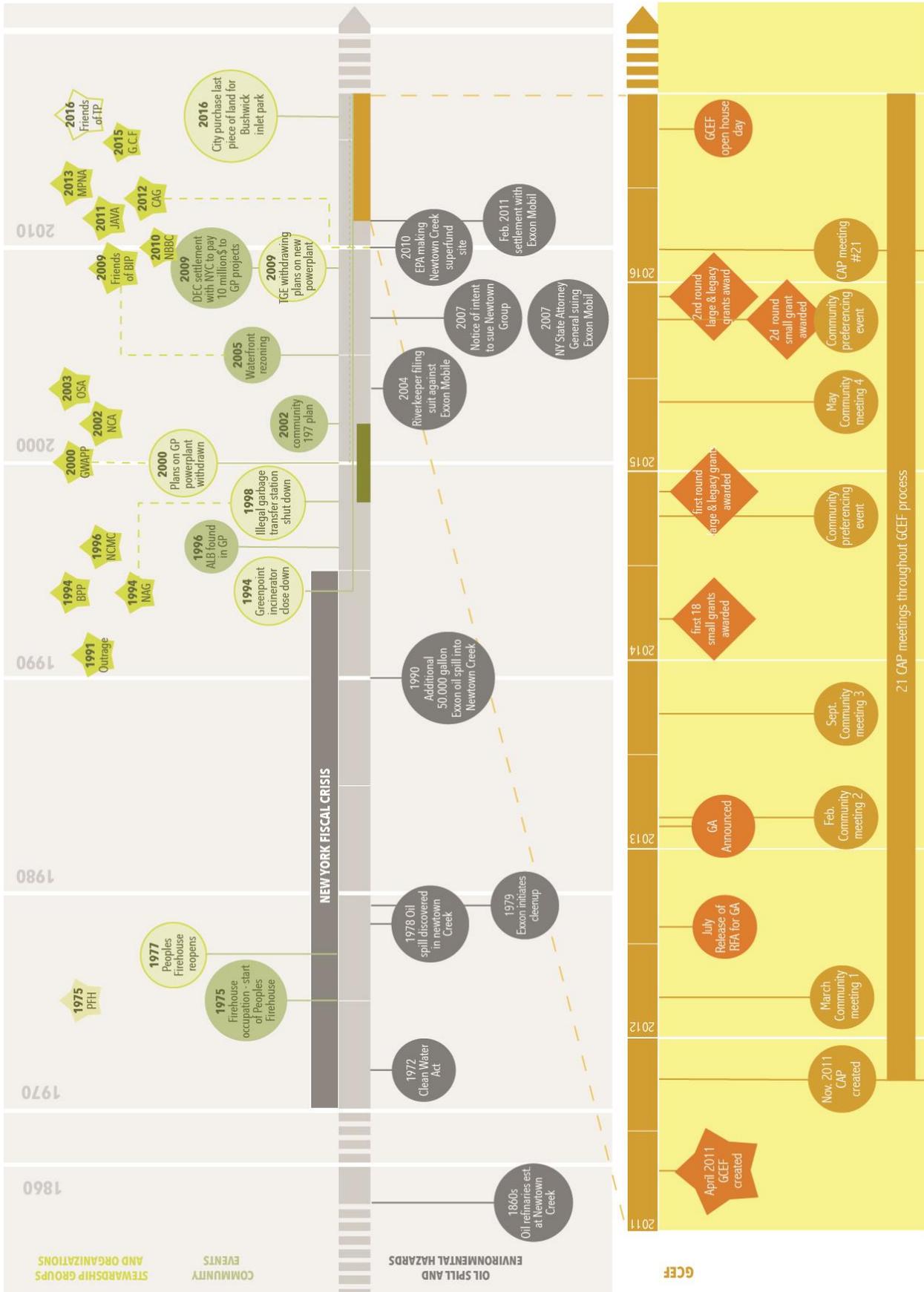
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# Appendix

## Appendix 1 – Timeline



The timeline was created manually using Adobe illustrator. It is based on first hand data from the interviews and secondary data, see sources listed in appendix 3.

## **Appendix 2 – Core Groups of Greenpoint, extended description**

The core groups of Greenpoint are presented below. While focusing mainly on Greenpoint, the lines between Greenpoint and Williamsburg are blurred, which is why one group based in Williamsburg but partly engaged in Greenpoint is also presented below.

**NAG** – Neighbors Allied for Good Growth, formerly known as Neighbors Against Garbage is a nonprofit and was created in 1994. Its mission was then to put an end to the destruction of North Brooklyn by the solid waste industry. In 1998 NAG achieved the shutdown of USA Waste transfer station on the North Side waterfront and was later involved in creating East River State Park on the same site (NAG, 2017). Since then the organization has taken on more diverse tasks aiming at shaping the development of the waterfront in a way that is environmentally just, sustainable and equitable and is supporting a “stable, healthy and mixed-use community” (NAG, 2017). The main mission of NAG continues to be focused on aspects of environmental justice and education about health hazards in the neighborhood. A NAG representative describes the work of the organization as following:

*“We have always had a very hyper-local community focus and we have transitioned on our topics that we have touched on, obviously founded around garbage issues and air quality, and we still care about that, but we did change our name to Neighbors Allied for Good Growth, as it was originally Neighbors Against Garbage, and today we focus mostly on environmental justice and environmental health. [...] But you know North Brooklyn has plenty of other issues that we don't have the capacity to touch on, as much as we used to. Like housing and food access and some more exclusively housing and social justice topics.”*

The organization has been instrumental in catalyzing the creation of several of the other groups and coalitions in the community district such as GWAPP and North Brooklyn Alliance (NAG, 2017) as well as in coordinating the 197-a Community Plans of Greenpoint and Williamsburg (NYC DCP, 2002). A 197-a plan is a tool for participatory planning that enables community boards to propose a community based plan that “once passed by DCP (Department of City Planning) and City Council, 197-a plans serve as advisory plans for future private and public developments within a community district” (Hill 2013: 2). Such a plan has no legal power but is an important tool for highlighting community needs.

**GWAPP** - Greenpoint Williamsburg Waterfront Association for Parks and Planning, formerly known as Greenpoint Williamsburg Against the Power Plant. In 2000 this non-profit was born out of a coalition consisting of community organizations, religious institutions and the Community Board 1 (GWAPP 2017; Interview 2016). The coalition rose up to oppose the construction of two new power plants on the Greenpoint/Williamsburg waterfront. The idea was to create a central organization that could speak for the whole community. Already established organizations such as NAG and Greenpoint Property Owners were instrumental in the process of alerting the different stakeholders in the two neighborhoods about the construction plans (GWAPP, 2017). When the plans for the power plants were withdrawn, just a few months after the movement was created, approximately 40 community groups had joined the coalition that later turned into GWAPP. In addition to preventing the construction of the power plants the coalition also helped bring the two neighborhoods of Greenpoint and Williamsburg closer together in this joint struggle. A resident of Greenpoint states that:

*“The power plant really brought us together because the power plant was planted right on the boundary [...] it really bridged the gap and brought people together because they, both of the neighborhoods, all of the sudden we're impacted, and that was interesting, because that's when I think the first time when the people thought ‘hey we better work together or else we're not going to do so well.’”<sup>X</sup>*

Originally NAG was the main organization representing Williamsburg and GWAPP was the one representing Greenpoint. But this divide seems to be shrinking gradually as the different needs of the neighborhoods becomes more similar to each other. An interviewee says that issues regarding waterfront development and public access to the waterfront are bringing the organizations together in a common cause. When the plants were defeated the coalition reformed to be an advocate for open space and sensible development in the community (Mazur, 2016).

**NCA** – The Newtown Creek Alliance (NCA) was initiated in 1997 when concerned citizens started meeting to address the degraded waterway of Newtown Creek. By 2002 the meetings had resulted in the formalization of NCA, which in collaboration with Hudson Riverkeeper and council member David Yassky’s office took on filing lawsuit against Exxon Mobil as one of their first projects (NCA, 2017). This lawsuit, settled in 2010, later resulted in the 19.5 million dollar GCEF fund. Regarding the GCEF fund the NCA webpage states that:

*“These projects are at the core of a new and more hopeful chapter in the life of the Newtown Creek watershed.” – NCA, 2017*

Since the initiation of the organization, it’s focus has shifted gradually away from the areas around the creek to addressing more of the creek in itself (NCA Interviewee, 2016), and to creating community access to the waterways from both Greenpoint and the Queens side of the creek. Their hope is that putting more people on the waterway, and exposing the neighborhood to this tucked-away resource will get more people involved in caring for the process of having it cleaned up (NCA Interviewee, 2016). Today the organization is working on developing relationships with both agencies and property owners around the creek to influence actions and undertakings that will have a long-term impact on the creek (NCA Interviewee, 2016). For instance some of the board members on NCA are owners of businesses located along the creek, and NCA are working with these businesses as well as agencies to create public access to the water. One example of such collaborative efforts is making the Newtown Creek accessible from the road end of Plank Road. A local concrete company have contributed with material and assistance, using their equipment and machines to help clear the path to the Newtown Creek from Plank Road, previously a bridge spanning across the creek but today a dead end road. NCA is the organization involved in the largest number of GCEF projects, actively running projects themselves or as a fiscal sponsor.

**OSA** – Open Space Alliance for North Brooklyn (OSA) is a nonprofit formed in 2003. The organization is working in close collaboration with NYC Parks Department, the community and its elected officials in order to “maintain, activate, enhance, and expand parks and public spaces in North Brooklyn.” (OSA, 2017). While modeled after well-known park conservancies in NYC OSA is a park conservancy focused on improving the green space in the whole of the North Brooklyn area rather just a single site. This makes OSA a kind of umbrella organization of parks and friends of park-groups in the north Brooklyn area. The OSA webpage states that:

*“In doing so, less advantaged areas of our community can be improved by leveraging resources from more affluent parts of the district.”*

OSA is taking on the role of fiscal sponsor to several of the smaller environmental groups and organizations in Greenpoint and more specifically groups that are managing specific parks or community gardens. The organization has hence become a vital node in Greenpoint in coordinating park programming and maintenance as well as distributing information between

smaller stewardship groups and community citizens. Previously mainly focusing on the Greenpoint neighborhood OSA is currently expanding its focus to better address open space issues in Williamsburg area as well, supporting projects of El Puente’s Green Light District and their advocacy for open space.

**North Brooklyn Boat Club** - The North Brooklyn Boat Club had its inaugural meeting in 2010. Working with advocating for and enabling human-powered boating on Newtown Creek, the boat club has since enabled local citizens to steward the nature of the creek ecosystems by providing access to these (NBBC, 2017). Although the boat club is primarily focusing on recreational activities it is listed here because of its close collaboration with primarily NCA and La Guardia Community College. The boat club is an important resource for classes and projects at LaGuardia, that utilize the partnership to access boats and other type of gear that they need to do fieldwork on the creek. Together with LaGuardia and NCA the boat club is engaged in primarily environmental education. The boat club is involved in the second largest number of GCEF projects, 11 in total and in three of those the boat club has the leading role.

**Green Light District, El Puente** – GLD, launched in 2011 is a branch of El Puente (founded in 1982 to combat the wave of violence that hit the south side of Williamsburg in the end of the 70s and beginning of the 80s). The GLD is an initiative spanning ten years from 2011 with the aim to “sustain, grow, green, and celebrate Williamsburg’s Southside community” (El Puente, 2016). Working with five primary areas of focus: Green Space and Environmental Justice, Health and Wellness, Arts and Culture, Education and Affordable Living, the GDL is explicitly making the effort to be a counterforce to gentrification by empowering local residents to become actors of transformation. The GLD webpage states that:

*“The Green Light District seeks to build equity and sustainability through connecting residents to each other, socially and culturally; sharing knowledge and resources across the neighborhood through partnerships, coalitions, and alliances; improving access to public resources; and building leadership in the community to carry our collective goals forward.”*

### **Appendix 3 – Sources of secondary data**

#### **Webpages of Local Stewardship Organizations**

GCEF Webpage	<a href="http://gcefund.org/">http://gcefund.org/</a>
NCA webpage	<a href="http://www.newtowncreekalliance.org/">http://www.newtowncreekalliance.org/</a>
OSA webpage	<a href="http://osanb.org/">http://osanb.org/</a>
GWAPP webpage	<a href="http://nag-brooklyn.org/">http://nag-brooklyn.org/</a>
NBBC webpage	<a href="http://northbrooklynboatclub.org/">http://northbrooklynboatclub.org/</a>
FBIP webpage	<a href="http://www.bushwickinletpark.org/">http://www.bushwickinletpark.org/</a>
MPNA webpage	<a href="http://www.mcgolrickpark.org/">http://www.mcgolrickpark.org/</a>
OUTRAGE webpage	<a href="http://outragenbk.org/">http://outragenbk.org/</a>
Java St Community Garden facebook page	<a href="https://www.facebook.com/JavaStCommunityGarden/">https://www.facebook.com/JavaStCommunityGarden/</a>
Franklin Street community garden facebook page	<a href="https://www.facebook.com/61franklinstgarden/?fref=ts">https://www.facebook.com/61franklinstgarden/?fref=ts</a>
Good.Clean.Fun facebook page	<a href="https://www.facebook.com/goodcleanfunfitness/Town">https://www.facebook.com/goodcleanfunfitness/Town</a>
Town Square webpage	<a href="https://www.townsquareinc.com/">https://www.townsquareinc.com/</a>
Go Green Brooklyn webpage	<a href="http://gogreenbk.org/">http://gogreenbk.org/</a>
YMCA Greenpoint webpage	<a href="http://www.ymcanyc.org/greenpoint">http://www.ymcanyc.org/greenpoint</a>

#### **Webpages of GCEF funded projects**

Greening Greenpoint webpage	<a href="http://www.greeninggreenpoint.org/">http://www.greeninggreenpoint.org/</a>
Curb Your Litter Webpage	<a href="http://curbyourlitter.org/">http://curbyourlitter.org/</a>

## Appendix 4 – Table of GCEF projects

Proj	Lead	Group	GCEF Grant	Proj	Focus
13	4	<b>Newtown Creek Alliance</b>	81928	Greenpoint bioremediation project	1   Environmental education, health hazards, soil remediation
			35000	Newtown Creek Samples - Studying water Quality for Public learni	2   Water quality, environmental education
			24735	North Henry Street End Restoration Planning	3   Nature/water access
			24980	The Living Dock	4   Environmental education, water quality, monitoring, stewardship
			<b>166643</b>		
11	3	<b>North Brooklyn Boat Club</b>	24426	Environmental Education Shed	5   Environmental education and training for educators
			24693	Floating Classrooms	6   Water access, environmental education, stewardship
			24660	Keeping cigarett butts out of Newtown Creek	7   Keeping cigarett butts out of Newtown Creek
			<b>73779</b>		
11	1	<b>Open Space Alliance</b>	<b>99000</b>	Greenpoint Park Community Stewardship Program	8   Foster stewardship for urban nature in Greenpoint
9	0	<b>Parks Department</b>	Project Partner		
7	2	<b>Neighbors Allied for Good Growth</b>	35737	Greenpoint Lead in Garden Soil outreach project	9   Environmental education, health hazards, remediation
			31736	Reduce reuse recycle Greenpoint	10   Trash reduction
			<b>67473</b>		
6	0	<b>McGolrick Park Neighborhood Alliance</b>	Project Partner		
6	1	<b>LaGuardia Community College</b>	<b>130178</b>	Intertidal wetland project	11   Creating habitat, remediating Newtown Creek
5	1	<b>Java St Community Garden</b>	19178	Improving sustainable practices at Java St Community Garden	12   Improve sustainable practices
			30220	Improving sustainable practices at Java St Community Garden	12   Improve sustainable practices
			<b>49398</b>	Improving sustainable practices at Java St Community Garden	
4	1	<b>Greenpoint Chamber of Commerce</b>	<b>471600</b>	Curb Your Litter	13   Clean up Greenpoint streets and nature, trash reduction
4	3	<b>NYC Audubon Society</b>	5669	Urban birds in McGolrick Park	14   Environmental education
			971782	Newtown creek Wildflower Roof and community space	15   Reduce stormwater, Environmental education, open space access
			24871	Urban Oasis in McGolrick Park	16   Habitat restoration
			<b>1002322</b>		
3	1	<b>National Wildlife federation</b>	1646776	Greenpoint Eco schools	17   Environmental education for school children
			99934	Greenpoint Eco schools	17   Environmental education for school children
			212043	Greenpoint Eco schools - Amendment	17   Environmental education for school children
			<b>1958753</b>	Greenpoint Eco schools	

3		<b>Green Thumb</b>	Project Partner		
3	1	<b>Big Reuse</b>	12500	Feasibility study - compost	18 Compost Feasibility study
2	2	<b>National Audubon Society</b>	24857	For the birds	19 Environmental education for school children, restoring habitat
			51843	For the birds	19 Environmental education for school children, restoring habitat
			24857	For the birds at Stanislaus Kostka	20 Environmental education for school children, restoring habitat
			47403	For the birds at Stanislaus Kostka	20 Environmental education for school children, restoring habitat
			148960	x	
2	2	<b>YMCA - Greenpoint Branch</b>	22750	Green beans environmental education	21 Environmental education for school children
			84000	Green tweens STEM summer program	22 Environmental education for school children
			106750		
2	1	<b>Brooklyn Publ Library</b>	5000000	Brooklyn Public Library	23
2	1	<b>Brooklyn Greenway Initiative</b>	1917717	West Street watershed Stormwater project	24 Reduce stormwater through creating bioswales
			1639878	West Street watershed Stormwater project	24 Reduce stormwater through creating bioswales
			3557595	West Street watershed Stormwater project	
2	1	<b>City Parks Foundation</b>	1950719	Greening Greenpoint	25 Creating tree stewardship network, environmental education
2	1	<b>Grow NYC</b>	477084	McCarren Park Urban Farms and Green Infrastructure Corridor	26 Create an urban farm and infrastructure corridor
2	1	<b>Evergreen</b>	99950	Greenpoint Industrial Environmental Improvement Program	27 research, design and implement improvements to local environment
2	1	<b>NYC Soil and Water Conservation District</b>	97675	Creating Green Buffers in the Greenpoint Industrial area - a Comm	28 Create habitat and green infrastructure in the industrial area
2	1	<b>Town Square Inc</b>	58450	Go Green Brooklyn	29 Creating an online hub for local environmental issues
2	1	<b>61 Franklin Street</b>	25000	Franklin Street Garden infrastructure and Rain Harvest Build	30 Urban gardening improvements
2	1	<b>Solar one</b>	22954	Green design lab env education program	31 Environmental education and stewardship
2	1	<b>Greenpoint Waterfront Association for Pa</b>	11700	Greenpoint env forum	32 panel discussions on Greenpoint environmental challenges
2	1	<b>Greenpoint Reformed Church</b>	5000	Green roof feasibility study	33 Feasibility Study for Green Roof
1	1	<b>The Greenpoint Monitor Museum</b>	599200	Greenpoint Monitor Museum - USS Monitor Park	34 Create a design suggestion for park at the East River Wwaterfront

1	1	The Horticulture Society of New York	562056	McGorrick Park Restoration	35	Restoring McGorrick park,
1	1	NYC Industrial and Technology Assistance	100000	Greenpoint business environmental stewardship	36	Helping local business to implement env. friendly projects
1	1	La Casita Verde/Eybeam Ateliere	25000	Soil Cycle mobile compost	37	Environmental education
			27600	Soil Cycle mobile compost	37	Environmental education
			52600	Soil Cycle mobile compost		
1	1	Groundswell	25000	Environmental Mural	38	Creating an environmentally themed mural
1	1	John Eriksson MS7/Center for Educational	24998	Brooklyn Native Wildlife restoration project	39	Restoring native habitat, environmental education, stewardship
1	1	Dupont Street Senior Housing	5000	Dupont Street garden Renovation	40	Urban gardening

Column 1: Number of GCEF project the group is engaged in

Column 2: Number of projects the group has the lead role in

Column 3: Sum of money that each project has received, and total amount received by each group, in grey or green depending on if it's a small or large/legacy grant

Column 4: Project enumeration

Column 5: Main focus of project

Highlights in grey indicate the total amount of grant money received by each organization.

Highlights in green indicates the projects and organizations that received large or legacy grants, the bigger sums for large scale projects.

**Appendix 5 – Main resources shared among the Groups**

<b>From</b>	<b>To</b>	<b>Type of resource</b>
Local Civic	Local Civic	Information sharing, advocacy and support, volunteer base, space for hosting events, credibility and legitimacy
Local Elected Officials	Local Civic	Funding, advocacy in political arenas, information sharing, community outreach
Local Business	Local Civic	In-kind donations, space access, funding, meeting space
Local org	Local Civic	Meeting space, volunteer base, equipment
Local Civic	Local Schools	Environmental education, education programming, equipment
City Civic	Local civic	Knowledge and education, expertise, fiscal sponsorship, legal assistance, funding
City Agency	Local Civic	Space access, support, expertise

The most obvious resource flowing between the different actors are summarized here, based on first hand data from the interviews. Between the civic groups of the area the most salient one is information sharing, advocacy and support, meaning that despite different focus of the groups they support each other in various situations and come together on topics related to the neighborhood in large.

The core groups provide legitimacy and credibility to smaller groups as well as function as fiscal sponsors. The local groups also receive support from city-wide organizations such as GreenThumb, 596Acres and Trees New York, for knowledge exchange, education on mainly gardening/park practices and advice on legal issues.

In creating new open space in Greenpoint the most prominent type of actor serving to making space accessible are businesses and city agencies. This is seen particularly along the creek shoreline and the East River where property of Metropolitan Transportation Authority and road ends, managed by Department of Transportation, are turned into water access points, or on industrial sites where businesses are collaborating with local groups such as the NCA on projects aiming at creating water access for the public. The physical structure of the area hence becomes a factor in how and with whom these groups will collaborate/cooperate with.

The types of businesses are active in the neighborhood also affects if and how money is donated. For instance some of the heavy industrial activities in Greenpoint have been replaced by movie studios and turned the neighborhood into a small filming hub. Smaller organizations also report more on the in kind donations and access to meeting space that local business and community organizations provide, indicating that this is important for younger groups trying to establish themselves.

## Appendix 6 – Interview template

Themes	Questions	Notes/Aim	Q
History /Goals and objectives	<p>What are the main goals (objectives) of the organization as a whole?</p> <p>Probe: is there a hierarchy to those objectives? Alt. Probe: Is any one more important than the other?</p>	Goals/Objectives Broad	1
	<p>What places/projects are you involved in and why?</p>	Spatial/Network	1
	<p><b>Transition statement – Intro GCEF</b></p> <p>What made you apply for GCEF funding?</p> <p>Probe: In what way has it influenced your work? Probe: (If group applied but was not granted) What would it have meant for your group to receive that grant?</p>	GCEF role to groups	2
	<p>Can you tell me, briefly, about the history of your group? How, why and when was it founded? key turning points?</p> <p>Probe: Key events sparking engagement Probe: Key turning points? Probe: How will the group live on (after the funding?)</p>	History	1
Current activity/-ies	<p>What do you <b>(group)</b> do on the sites/in the projects you <b>(group)</b> manage/are engaged in? – <b>Depending on type of group</b></p> <p>Probe: Actual activities - Social/Nature related/Spatially (How are those coupled?)</p>	What is done Tools	1
	<p>What is the main purpose of the work/activities you <b>(group)</b> do on site?</p> <p>Probe: Desired/expected outcome of the activities for: - Participants - The neighborhood/community Probe: what are the things you hope this will generate? Probe: does it differ between the different projects?</p>	Social/Ecological Why/for whom <b>Zoomed in</b>	
Objectives	<p>Have your goals/visions/objectives always been the same or have they changed?</p> <p>Probe: Have there been other objectives in addition to the current ones?</p>	Social/Ecological	1
Strategies	<p>9. How do you work to achieve your goals?</p> <p>Probe: what are important strategies for your group to achieve your goals? Probe: Has those methods changed, social/eco/physical? Probe: How do you recruit participants and volunteers? Engage people? Probe: Influence the neighborhood and its development</p>		2

	<p>What factors have a positive effect on your ability to reach your goals (objectives)?          Probe: How did those factors come about – was it by chance/external events, or did you create them?</p> <p>What are the greatest challenges you face in trying to achieve your goals (objectives)?          Probe: Are there actions (in addition to the strategies you mentioned above) that you take specifically to address those issues?          Probe: what do you perceive as the biggest hindrance to the environmental work in the neighborhood?</p> <p>How has the GCEF funding influenced your ability to reach your goals (objectives)?          Probe: Have they (objectives) changed with the funding?          Probe: Have things required for grant reporting (e.g., monitoring, etc.) affect how the stewardship organization operated?</p>		1
			1
			2
Collaborative actors/ network partners	<p>What community groups/organizations/(community actors) do you collaborate/partner with? – Open ended first!          Probe: Why are those important collaborators?          Probe: What do they bring/provide to the group? And what do the group provide back? (Financial, contacts, access to space?)          Probe: What is the character of your collaboration (with the additional)?</p> <p>How has the GCEF influenced your ?          Does it make the network more closed or is it also open to people/groups not included in the fund? Does it risk decreasing diversity in the community?          Probe: Who is missing at the table?</p>		1
			2
Other	<p>If there were no (economic) limitations/If you could dream what would you do?          Probe: What would those actions/changes bring on/mean?</p> <p>Is there something you'd like to add to the conversation?          Something important that you feel we have not touched upon yet?</p>		

## Appendix 7 – Meetings and events attended in Greenpoint

Showing the number of meetings and events attended during the fieldwork a part from the interviews.

	<b>When</b>	<b>What</b>	<b>Where</b>	<b>With</b>
<b>1</b>	Saturday, Oct 15	GCEF Open House Day	Multiple locations in Greenpoint	GCEF
<b>2</b>	Tuesday, Oct 25	OSA Town Hall Meeting	McCarren Play Center, 776 Lorimer	Open Space Alliance
<b>3</b>	Saturday, Oct 29	Java St. Community garden event	Java St Community Garden	Java St. Community garden.
<b>4</b>	Friday, Oct 30	Soil testing workshop and volunteering at Eagle St rooftop farm	Eagle Street Rooftop Farm	NAG and Eagle Street Rooftop Farm
<b>5</b>	Tuesday, Oct 1	North Greenpoint Development Meeting	Polish Slavic Center	NAG, GWAPP, NBDC and others
<b>6</b>	Thursday, Nov 10	Meeting on affordable housing	Pencil Works	Local Politicians and Community Actors
<b>7</b>	Friday, Nov 11	McCarren Park Stewardship Day	McCarren Park	Greening Greenpoint (NY Tree Trust) and Eco-Schools project
<b>8</b>	Tuesday, Nov 15	Long term control plan kick off meeting	Newtown Creek Treatment Plant Visitor Center	NYC Dept. of Environmental Protection, NCA
<b>9</b>	Tuesday, Dec 6	Environmental Happy Hour	Muchmores, Williamsburg	NAG

**Appendix 8 – Spatial Data**



This map displays the different sites where local groups are working in. The map is based on first hand data from the interviews and secondary data from GCEF documents. A darker shade of green indicates that more groups and organizations are working, or somehow involved in stewardship, at that site. The green dots indicate positions for where tree stewardship has been taking place.