Introduction

Waterways can be among a city's most valuable assets. They provide transportation, environmental services, economic development opportunities, and access to nature. Cities today are reinvesting in their neglected industrial waterways as sources for economic growth and urban vitality. But waterfront development often happens where development is already most active. As a result, its benefits tend to accrue to the wealthier parts of cities, often the downtown core. This further concentrates access to the best parts of civic life among an increasingly small elite. In cities in which economic inequality falls along racial lines, this development has the potential to further reinforce economic and social segregation. Do these features ensure that waterway development will deepen social and economic inequality in cities? How can cities use waterway development intentionally as a tool for reducing these divisions?

The 2017 Chicago Council on Global Affairs report, *Urban Waterways in Global Cities*, identifies promotion of equity and social inclusion as among the central goals of waterway development. Now leaders must articulate how this aspect of waterway development can best be achieved.

At a bare minimum, existing and planned waterway development must be physically accessible to the public. But that is not enough. The 2018 Chicago Forum workshop on this topic will take this reasoning a step further to solicit and examine concrete
ways in which urban waterway development might be used by cities to expressly improve the quality of life and opportunities for economically or socially excluded populations beyond the downtown core.

This framing paper provides an overview of the relationship between urban waterway development and equity. It includes some tentative principles by which cities could approach waterway development when social equity and economic opportunity for low-to-moderate income communities are promoted to explicit policy goals. Finally, practical tools a city might use to achieve these goals are listed.

The purpose of this document is to stimulate and guide discussion at the 2018 Chicago Forum on Global Cities. A final report incorporating feedback, concerns, and additional recommendations will be published following the workshop.

The Intersection of Urban Waterway Development and Inequality

Improving social equity has become one of the great challenges for the current wave of urbanization, which has concentrated wealth and opportunity in city centers (Baum-Snow, et al., 2014; Sassen, 2014; Fainstein, 2010). Development has followed this new wealth, and so the simultaneous expansion of sustainability initiatives. Interest in green stormwater infrastructure, more green space, and remediating previously industrial (and often dangerously toxic) land uses has arrived mainly in wealthier, and often whiter, parts of the city.

The benefits of green infrastructure and industrial redevelopment are manifest and can take place in a variety of ways, including redevelopment of downtown city centers, reclamation of flood plain to park spaces, and post-industrial remediation. These improvements are linked to gains in well-being, public health, and rising home values (Butler, 2007; Anguelovski, 2016; Wolch, et al., 2014). But lower-income communities and communities of color have seen much lower rates of investment (Gordon and Dew-Becker, 2008; Stone et al., 2018). These communities already start at a deficit, since they are much more likely to be located near un-remediated environmental hazards (Lester, Allen, and Hill, 2001). For communities of color, even wealthier ones, this is still more pronounced (Clark, 2014). Together this presents a real and serious equity gap which cities must address for social, environmental, and economic reasons.

Waterway development—which includes reducing pollution hazards as well as constructing new amenities—has had special value and attraction for urban centers and wealthier communities. Many cities have transformed previously disused or industrial waterfronts into bustling centers, which have obvious economic, social, and public relations value (Council on Global Affairs, 2017). There are several connected reasons for thinking waterway development may have even greater value for marginalized urban communities.
First and foremost, contaminated urban waterways are a vector for exactly the sorts of environmental and public health hazards to which these communities are disproportionately exposed (Korfmacher, 2014). They are contaminated with a legacy of heavy metals, industrial contaminants, runoff from stormwater, and sewage effluent (Douglas, 2017). The resulting lack of waterfront recreational infrastructure reduces opportunities for exercise and access to green space, both of which are connected to gains in individual wellbeing and happiness (Wolch, et al., 2014). Further, this development creates, as it does in more affluent neighborhoods, the opportunity for new business development (Dunn, 2010). Environmental protection and remediation produces potential benefits in a number of directions beyond public health as well. These include habitat restoration and environmental services like natural water filtration, reductions in air pollutants, and flood protection (Wessells, Taufen, and Lejano, 2017). Perhaps most importantly of all, cities should provide safe, useful, and economically stimulating waterfronts for its most vulnerable populations. If these things are among the great achievements for thriving cities, then access to them should not be distributed on the basis of wealth or race.

While civic green and sustainable development plans frequently reference concern for social equity and economic inclusion, reviews of their implementation and assessment practices show very little by way of substantial efforts to ensure these benefits arrive or measure their effectiveness along this dimension (Martin, 2011; Korfmacher, et al., 2015). This is hardly surprising because a central element of most waterway development projects is providing an economic return on investment. This cannot be guaranteed from investing in poorer communities, and making the case for such projects may require accepting some economic loss in exchange for gains in other non-economic social goods. This suggests that cities must sometimes organize their waterway development plans around the goals of social equity and expanding economic inclusivity.

Even though investments in environmental remediation, waterway access, transportation, and green space all have well-established positive short-term effects, they can have more mixed consequences for low-income residents over the long term. “Eco-gentrification” describes cases in which investments in green infrastructure raise the costs of living in a community such that low-income residents are priced out of living there (Dale and Newman, 2009). It is a central purpose of waterway and park development to make a community into a more attractive place to live and work, and indeed to raise the value of property in those communities. But in low-income communities, where residents are more likely to rent property than own it, this can mean getting pushed out of the neighborhood to cheaper, less desirable places. Eco-gentrification is another reason to argue that waterway development must be carefully implemented to benefit low-income residents (Hasse et al., 2016).

This speaks to the importance of waterway development plans that include longer-term economic support mechanisms for spreading the benefits as widely as possible. It emphasizes the value of early and consistent involvement by these communities in
planning development (Douglas, 2017; Pearsall and Pierce, 2013). The absence of serious efforts to measure and report on progress along these dimensions is a serious impediment to assessing or promoting the benefits of equity-targeted environmental development. Waterways are a unique resource (or liability) for a community. They are also ones that cities have an antecedent interest in protecting and remediating. Rivers can physically connect affluent and less affluent parts of a city and thus can, quite literally, be a pathway for resources to flow between them. While low-income communities ought to be interested in the environmental and economic benefits of waterway development, it is also clear that it can create a sort of bind for them. If the investment is not at least partially targeted at fostering non-economic value, long-term multi-faceted support, and an effort to measure and report on progress, the benefits for the people living in these communities will remain aspirational.

Six Principles of Urban Waterway Development for Social Equity

Waterway development has the potential to produce positive effects on a range of inputs essential to greater social equity and economic opportunity for marginalized urban communities. But it also suggests that these outcomes are far from guaranteed and may even be frustrated if development planning is not done with these goals in mind. The following general principles for waterway development projects could increase the likelihood that they will be a benefit to historically marginalized communities. This list is not exhaustive or offered in any particular order.

1. The communities affected should be robustly and consistently involved in the planning, implementation, and monitoring of projects.

   We can learn very little about what a community needs or wants unless it is deeply involved in the process of protecting its own special assets. There are often historical reasons for low-income communities to distrust civic re-development plans, and the only way forward is through robust, consistent, and transparent shared decision-making.

2. Environmental services and restoration are as (or more) important than new waterfront amenities.

   The attractions of new boardwalks, boathouses, and parks are obvious. But efforts to make previously industrial or disused waterways less toxic may be much more valuable in terms of improving residents’ health and safety. New green space is a good thing, but the context around it matters for its value. Environmental services, for example rewilding riverfronts to better handle flooding, can provide significant advantages both in terms of public health and in reducing the economic losses from flood events.

3. Waterway development must be part of a long-term, multi-faceted investment that includes protections to prevent community displacement.
The effects of new green development are long-term, therefore support and planning must reflect the city’s commitment to the long-term goal of improving social equity and economic inclusion. This likely includes economic supports for businesses and other infrastructural improvements linked in a package along with waterway development. If the goal is to improve quality of life for current residents, long-term efforts to prevent displacement must be included.

4. **Developing for social equity and economic inclusion likely means using measures of success beyond economic return on investment.**

Producing real benefits will likely mean investments in low-income communities that will show much more diffuse economic returns than cities typically desire, particularly in the short-term. These include improvements in public health, safety, and community investment by residents which are very valuable even if they do not produce financial returns for private or public investors. Taking this broader view of value is an intentional choice and structures how funds are raised and deployed.

5. **New development should emphasize and facilitate physical and transportation connections between socially separated communities.**

Waterways often have the benefit of physically connecting parts of the city, but when they are in bad shape they create barriers to interaction and transportation. Preventing communities from becoming physically and then economically isolated is an important element in helping them thrive.

6. **Clear methods of assessment and reporting should be included in development plans both to check on progress and allow plans to adapt to conditions.**

Financial returns are fairly easy to assess. Without methods for measuring and assessing the social value of waterway development, discussion of its benefits will remain fairly abstract. There are many ways to produce such measurements, and even if they always remain somewhat controversial, setting clear standards and attempting to meet them is important for building resources for future projects. These measurements should take a broad view of value, including gains in public health, reported satisfaction, and ecosystem health.

**Strategies for Successful Waterway Development**

The above principles can guide attempts to develop urban waterways equitably and for economic inclusion. But cities will need specific strategies to successfully guide these principles into action. Different cities will require quite different approaches, but sharing and cross-pollination of ideas can be adapted to different cities’ needs.
1. **Plan with vision and transparency.**

The planning phase of an equitable waterway development project ought to include, *from the inception* of the project, a clear mission statement of goals drawn from local concerns, environmental concerns, and at least the most measurable equity benefits. These should sit alongside any reputational and economic benefits that don’t accrue immediately to the community affected.

To encourage transparency, accountability, and the support of the target community, cities may organize cross-scale working groups. These should include actors from a variety of levels—local community based-leaders to central government agencies—to have a real role in decision-making. It may also be wise to include a formal statement of roles and responsibilities at various points in the project.

2. **Diversify funding sources and models.**

Unsurprisingly, finding the right sorts of funding is crucial. Different sorts of funding provide their own unique incentives that influence the course and value of a project for locals. If development brings in tax revenue, but parks, remediation, and amenities all cost revenue, the incentive to develop as much as possible has to be balanced against the social impacts of that development. The most traditional funding sources are not necessarily the best ones in this case, so cities may need to be creative, as is the case with Chicago’s Neighborhood Opportunity Fund, described in more detail below. Private loans and funds tied explicitly to social equity gains may also be available, working on the model of Chicago’s Low Impact Investment Fund. And cities may also look for opportunities to link water infrastructure improvements and, in particular, development of waterfront environmental services. The State of Illinois River Edge Redevelopment Zone program is an attempt to marry environmental restoration with economic development, but it is limited in its statutory scope, geographic reach and by association with the budgetary issues of the State.

Funding can also be transferred from more prosperous areas of the city. For example, Chicago’s Neighborhood Opportunity Fund focuses on reforms to the Chicago Zoning Code to leverage new downtown development in and around the Loop which generates funds that will be redirected to the City’s South and West sides. Eligible projects for this funding transfer include grocery stores, restaurants, retail, theater, and art galleries. This general approach of linked development is increasingly common as an approach to investing in connected, yet disparate geographies (i.e. along a transit line), but to our knowledge has never been deployed along a waterway corridor.

Cities may also consider the way waterway projects fit into a wider set of improvements, thus favoring a dispersion of resources over one major investment
at a time. Waterways often traverse multiple neighborhoods. Large scale, multi-
million-dollar capital projects can be “a myopic approach ... we want big projects
that can be “unveiled” to spectators at a specific point in time. In reality, a more
modest, piecemeal approach is often better both for the environment and for the
socio-economic composition of large cities. Ideally, smaller-scale projects would be
implemented in neighborhoods across urban areas simultaneously.” (Haffner, 2015)

3. **Assess social impact in addition to economic returns.**

Meaningful social impact assessment is often absent or an afterthought. Without it,
however, there is no real way to tell whether a project had its desired effect.
Moreover, failure to do assessment deprives us of useful knowledge about what
works in equitable development policy. Even though any such measure will be
necessarily imprecise as it attempts to track complex social factors, conscientiously
applied measures provide useful information. Racial equity assessment tools can
be used to determine whether specific policies have unintended consequences for
communities of color. In Chicago and other cities, this approach is being used in
the context of school and housing decisions. For example, Chicago United for
Equity (CUE) has facilitated Racial Equity Impact Assessments to assess the
unintended consequences for students of color of Chicago Public School decisions
such as school closures, merges, and building new schools (CUE 2017). Other cities
such as Austin, TX and Seattle, WA have begun to use racial equity assessments in
planning decisions (All In Cities; Arias, 2017)

Health Impact Assessments (HIAs) are already widely used to guage the public
health consequences of projects (Korfmacher et al., 2015). In Chicago, an HIA was
used to assess potential health impacts of a new trail in Englewood (IPHI & CDPH,
2016). An HIA was begun (but not completed) to assess the potential health
impacts of turning a formerly-industrial riverfront parcel into park space (Adler
Institute on Social Exclusion, 2015). Elements of HIAs are also being incorporated
into some riverfront activation and development projects, especially in industrial
areas on the South Branch of the Chicago River and on the Calumet river system
(Riggio, 2017). Nationally, Health Impact Assessments are being increasingly used
in regard to physical planning decisions, including economic, housing, and
recreational and environmental projects (Human Impact Partners). Important to
tracking equity, model HIAs should include a monitoring phase in which the results
of the development are measured and tracked over time, and compared to the
predicted impacts.

Like HIAs, specifically designed Social Impact Calculators can be used to quantify
public health and social returns on investments. These have been created and used,
for example, by the Low Impact Investment Fund in their Social Impact Calculator
(LIIF). The metrics for success here should take into account whether the benefits
are accruing to existing residents, rather than to new higher-income residents
displacing lower-income ones. They should also be chosen with input from local
residents, as their interests and sense of what would count as a successful project may not map onto what designers or city planners far removed from the community might guess.

4. **Integrate projects into long-term investments.**

When social equity and economic inclusion are explicit goals, it is essential that waterway development projects are not thought of as one-off activities, like the placement of a park or a hazardous site remediation. Integrating them into a longer-term stream of investment is important for preventing eco-gentrification and for monitoring progress. Waterway projects must include or coordinate with projects in other areas, for example extension of education services, public safety, transportation, affordable housing, and business development. Some of this can also be achieved through changes to zoning, easement, permitting, and tax policies that benefit low-to-middle income residents near the development.

All of these strategies would benefit from considering relevant comparative case studies and a frank discussion about what did and did not work. Success stories are available, such as the Newtown Creek Alliance—a community-based organization in Brooklyn, New York “dedicated to restoring, revealing and revitalizing Newtown Creek.” The creek was declared a Superfund site in 2010. Since then, the community secured $19.5 million to pay for environmental remediation and green infrastructure. Importantly, the Newtown Creek Alliance rejected the typical downtown waterfront redevelopment model and is prioritizing improving the industrial profile of local industrial businesses and engaging in workforce development to create local green jobs. Through their efforts, the Alliance has seen many successes – from increasing green infrastructure to manage and filter stormwater, introducing new intertidal wetlands to improve water quality and protect the shoreline and developing new education - all of which are designed to support local industry, maintain jobs and protect humans and the environment. (Newtown Creek Alliance)

West Oakland is also instructive in considering strategies for equitable redevelopment. In the face of rising property values and concerns about gentrification, the waterfront Oakland Army Base project goes beyond a typical Community Benefits Agreement, focusing on how the project will serve the community. Promoting local jobs and local hiring and prioritizes community engagement as a key priority in the process. In partnership with the City, stakeholders developed the Community Jobs Oversight Commission, a team of developers and community members charged with overseeing the project and the West Oakland Job Center which provides support to job seekers and helps match available positions with local candidates. This democratic approach to equitable development demonstrates the value of government and developers, in particular, of shifting from status quo development to an authentically inclusive process. (Rahman, 2016)
Workshop on Waterway Development at the 2018 Chicago Forum on Global Cities

In theory, policy design, and implementation, using waterway development for social equity and economic inclusion is an active and intentional process. The benefits of waterway redevelopment for low-income communities do not arrive automatically with new green spaces or waterfront amenities. But there is still a lot we do not know. We need more knowledge about the connections between certain kinds of development projects and the benefits they bring to low-income communities. We need more knowledge of the tools that cities are and could be using to convert this development into lasting social and economic value. And we need more knowledge about how to develop metrics for long-term evaluation and support of waterway redevelopment plans.

At the Forum on Global Cities Workshop in June 2018, participants will discuss:

1) What are the most important priorities for ensuring that urban waterway development projects promote social equity and economic inclusion?
2) How can city leaders ensure that affected communities are “transparently, robustly, and consistently” involved in decision-making processes?
3) What creative funding models should cities and developers pursue to ensure successful projects and profitable investments?
4) How can cities develop metrics for long-term evaluation of the social impact of waterway development projects?
5) What other case studies around the world provide helpful examples from which leaders can learn what to do or not to do when developing urban waterways?
6) What other key principles or strategies are missing from this outline?

With this as background, we hope to hear about the experiences of cities from across the globe at the 2018 Forum on Global Cities. A final report summarizing key findings and recommendations will be published following the workshop.
Sources


Newtown Creek Alliance, www:newtowncreekalliance.org, 2018


Rahman, K. Sabeel. The key to making equitable development more equitable is making it more democratic. “The Nation.” April 26, 2016


