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# Introductory Chapter: Landscape Reclamation as a Key Factor for Sustainable Development

Luis Loures

## 1. Landscape reclamation: theoretical evolution vs. practical achievements: a brief overview

Landscape is continuously changing [1, 2] as a result of complex and interacting natural processes coupled with planned and unplanned actions by man [3]. This scenario of landscape transformation worldwide “*has raised global concerns*” ([4], p. 326), as it is the need to rethink landscape while protecting the environment. This is especially true for previously developed areas that are now abandoned or underused. Instead of consuming green lands, the brown lands need to be redeveloped and given new life, achieving a more sustainable urban setting [5–7].

In fact “*it has long been realized that urban planning and open space preservation are part of the same process*” ([8, 9], p. 273), “*and that the most effective way to protect open space is by effectively containing and managing urban growth*” ([8, 10], p. 273). In this regard, land transformation policies, strategies, methodologies and processes have been considered an important tool for urban containment, fostering urban redevelopment and revitalization [11–15].

Still, as shown by Loures [16] it is clear that these contributions and the principles they integrate, have not been adequately assessed regarding land transformation efforts. However, this approach may be considered a proficient method to address urban sprawl, increasingly viewed as significant and growing land-use problem that encompasses a wide range of social, economic and environmental issues [8, 17, 18].

The relevance and popularity of landscape reclamation and landscape transformation approaches and projects are increasingly recognized and as referred by Reed [19] “*nearly every significant new landscape designed in recent years occupies a site that has been reinvented and reclaimed from obsolescence or degradation, as cities in postindustrial era remake and redefine their outdoor spaces*” (**Figures 1-4**).

Consequently, questions such as: What should be done with these landscapes? Which functions might these areas acquire in the future? What makes these spaces underutilized? What obstacles keep these landscapes from being transformed? Who is responsible for transforming them? Who is best qualified to do it? Is this process a single profession endeavor? Among others, remain to be answered. For this reason, new methodologies and frameworks are needed. In a period when “*(...) that seemingly old-fashioned term landscape has curiously come back to vogue*” ([23] in [24], p. 23), it is urgent to reinvent the way in which these derelict landscapes are transformed, considering not only environmental issues but also historic and cultural values, economic opportunities, and social needs.



**Figure 1.**  
*Millennium Park, Chicago—view from Sears tower. Loures [20].*



**Figure 2.**  
*Duisburg Nord Park, view from the Emscher river side. Loures [21, 22].*

The origin of this growing concern may be traced from a period when industry, became one of the main protagonists in the transformation of the city (Rossi, [25]). However, the consequences of the globalization of industry, relocation and restructuring of several industrial sectors over the past decades had a profound effect on quite a lot of industrial areas all over the world, producing a vast array of obsolete



**Figure 3.**  
*Distillery District, Toronto, a multifunctional cultural asset from the city of Toronto. Loures [21, 22].*



**Figure 4.**  
*Westergasfabriek, Amsterdam, channel side view. Loures [21, 22].*

industrial facilities with various impacts generated from them [26]. For this reason, numerous countries, all over the world, have undergone countless postindustrial land transformation projects (generally known as rehabilitation, revitalization, reclamation and/or redevelopment programs), in order to mitigate the negative effects arisen from these changes. In this scenario it is increasingly recognized that managing urban growth, transforming underused landscapes and protecting open space constitute relevant efforts to achieve sustainable urban planning.

Now no longer new, the production factories of the modern era have become obsolete, forcing this generation to decide on the disposition of the last generation's industrial environment. The international industrial climate, which Pirelli [27] has termed as the third industrial revolution has rendered obsolete several industrial structures, technologies and processes of the first half of the twentieth century. Demolition and abandonment were and continue to be "*fairly common approaches to deal with facilities that were designated as 'surplus' no longer serving their original production functions*" ([28], p. 48). Unfortunately, it is still common to find older buildings, characteristic of the industrial society, simply abandoned, surviving alongside with recent development areas. Nevertheless, the creation of new and more severe environmental legislation, and the public pressure related with the need to protect the environment, increased the necessity to redevelop derelict landscapes [29], considered by many as unrealized resources for initiating urban regeneration and ecological restoration [30–32]. Often in advantageous locations near city centers, along waterfronts, supported by existing infrastructure and adjacent to residential communities, these landscapes are environmentally impaired resources that need to be returned to productive uses, and reintegrated into the surrounding community [33]. Additionally, these land transformation projects, if developed at a larger scale and across multiple sites, could contribute to restore natural processes and functions, create multifunctional landscapes and promote sustainable growth [34].

## **2. Landscape reclamation: a multiplicity of activities towards sustainable development**

The complexity inherent to the majority of current landscape reclamation projects, evident in the number of different ways in which they have been characterized, both in the literature and by designers and other specialists who worked and/or analyzed them, make derelict landscape redevelopment difficult to accomplish. Apart from eminent contamination and liability on many of these landscapes [35–37], redevelopment processes have to consider also planning, real estate transaction and land use issues [38–40], plus community and economic development issues [40–43], among others.

Considering this background and current need to reclaim derelict landscapes, this book will address both planning and design issues related to derelict land transformation. In fact, as mentioned by (Commoner [44], cited by [45]), thought the main problem lies in our means of production, in order to solve our derelict land problems, we need to change not only the location of certain activities but also the ways of making things. As it has been expressed, understanding this phenomenon is perhaps one of the most relevant consequences of assessing landscape reclamation issues, given that it becomes simpler not only to comprehend the current state of the art as it applies to us, but also to envision possible solutions for present and future problems [16, 21, 22, 29, 46–48].

As present trends of economic growth, resource consumption and environmental degradation become increasingly acknowledge as neither an acceptable nor sustainable option, discussion around why and how to redevelop derelict and or abandoned landscapes become progressively more relevant to growth management policies. As this remarkable phenomenon is gaining momentum, it becomes of utmost importance to address in one hand, the condition of these landscapes, and in the other the principles inherent to this process and the strategies and frameworks that best suit their redevelopment. For this reason, it is essential to study and understand both the differences between spaces generally typified as derelict landscapes, and the land transformation activities inherent to the redevelopment of these sites.

It is a given, that derelict land redevelopment, provides constant new opportunities for those who have the desire and the ability to seize landscape, regardless of their nature [6, 20, 49–51], for this reason landscape redevelopment and reclamation activities are considered to be, a significant resource for achieving sustainable development [52–55], contributing as well to improve life's quality. In this regard, reclamation processes need to be thought in terms of *sustainability* and/or *sustainable development*, terms that get used a lot these days, and which since their appearance have been faced as new development paradigms introduced in land-use matters, merging social, economic and environmental “dimensions” [56], and putting nations to work together in the definition of new principles and frameworks towards sustainable development.

Even if throughout recent years several normative theories associated to landscape reclamation, considering both design and planning principles towards sustainable communities, were created, the answer to this question is far from being achieved. From an overall viewpoint, sustainable landscape reclamation represents a subject of real sustainable dimensions, considering it is a positive response to environmental, social and economic issues [57, 58], which are the main dimensions of sustainability.

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