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## **“Economic heritage impact assessment” as a tool for evaluating the impacts on the great requalification project of the coastal cities, Unesco sites. The case study of Torre Annunziata, in the gulf of Naples**

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**Keywords:** Regeneration of the waterfront, evaluation of the cultural and economic impacts, UNESCO port cities, economic impact assessment.

**Abstract** This article starts from the study of the historic port cities, that today are facing the challenge of the urban waterfront requalification, through the preservation of the cultural and landscape heritage. The recommendations on the “*Historic Urban Landscape*”, and the operating tools promoted by the ICOMOS “*Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*” of 2011, configure themselves as the most recent dispositions regarding the preservation, protection and enhancement of the cultural heritage (Fusco Girard, 2010). The ICOMOS Guide it was considered the most suitable tool for evaluating the impacts of the big requalification project of the urban waterfront on the cultural heritage. To fully understand this tool it was made an application for evaluating the impacts of Pompeii Great Project on the waterfront of Torre Annunziata, a coastal city in the Gulf of Naples, UNESCO Site. After this analysis phase it follows a reflection on how to improve the Heritage Impact Assessment as a tool able to evaluate not only the cultural impacts, but also the economic ones, so we can speak of “economy of the cultural heritage”. The last proposal is that of supporting the process of “*Heritage Impact Assessment*” with an evaluation of economic impacts, through an analysis of costs/benefits, for estimating in a monetary terms, the benefit of the investments into the preservation of the historic urban heritage of the coastal cities, proposing an “*Economic Heritage Impact Assessment*” (EHIA). This method was elaborated from the author, into the PHD thesis “*The Historic Urban Landscape of the coastal cities: challenges and opportunities*”. The case of Torre Annunziata offers the possibility to overcome the mere evaluation of the cultural impacts proposed by the ICOMOS.

## INTRODUCTION

The aim of this paper is that of recapping a research work, elaborated from the author, within the PHD thesis of the Architecture School of Naples, titled “*The Historic Urban Landscape of the coastal cities: challenges and opportunities*”.

The first step of this research it was that of understanding which are the characteristics of the coastal cities, that make them different from the others of the hinterland.

The natural landscape of the coastal cities represents an “added value”, is “quality landscape”, that becomes attractive factor in the competition among territories (Fusco Girard, 2011), especially when these sites are registered into the List of the World Heritage.

From the state analysis of the art we deduce that, following the recent economic crisis, the change of the demographic dynamics, the energetic issues and the depletion of the natural resources, people from the port cities have understood that restarting from the sea, it could have been the “winning strategies” for the regeneration, cause the urban waterfront and the ports are capable of bringing social, economic and environment advantages (Fusco Girard 2010).<sup>1</sup>

In this perspective this research work focused on the problems of the “sea cities”, that today are facing the challenge of the urban waterfront requalification, characterized by the presence of huge abandoned areas, occupied from the remains of the heavy industry.

For this reason some good referring practices are selected, such as (Barcellona, Genova, Marsiglia, Valencia) to analyze which are the best redevelopment strategies of the waterfront. From this analysis is emerged that quite often, this projects regarding the requalification of some areas recognized from the UNESCO, as World Heritage.

For this reason they analyzed the recommendations on the “*Historic Urban Landscape*”, for protecting the cultural, landscape and archeological heritage, and in the specific, the tool of the ICOMOS Guide of 2011, “*Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*”, through which is allowed an estimation of the great requalification project regarding the cultural and landscape heritage.

The study started from a deep and careful analysis of the tool “Heritage Impact Assessment” (HIA), as it was elaborated by the ICOMOS, and from some good practices in which this tool it was already used, for evaluating the impacts of the great requalification project on the heritage, endowed by “*Outstanding Universal Value*”<sup>2</sup>.

Following the analysis of the Guide and the study of the good practices, the step forward of this research, it was that of making an HIA for evaluating the impacts of the Pompeii Great Project on the waterfront of Torre Annunziata.

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<sup>1</sup> The ports are the economic wealth of the cities, the industrial, logistics and tourism activity are located inside. They represent a kind of “magnet” that attracts new services that generate wealth. Cfr. Fusco Girard L. (2010). Sustainability, creativity, resilience: toward new development strategies of port areas through evaluation processes. International Journal of Sustainable Development 2010, Volume 13, Number 1-2/2010, p.162.

<sup>2</sup> The case studies where it was made a “Heritage Impact Assessment”, are those of the city of Liverpool and Stockholm. This method was applied to assess the impacts of great redevelopment projects, involving the requalification of the Docks of Liverpool and the construction of two major infrastructure for the city of Stockholm (Stockholm Bypass ). Cfr. De Figueiredo P. (2011), LIVERPOOL WATERS Liverpool Waters Heritage Impact Assessment: Assessment of Potential Effects on the Liverpool World Heritage Site, [www.liverpoolwaters.com](http://www.liverpoolwaters.com); Lisitzin K., (2012), The potential impact of the Stockholm Bypass and Ekerö Road project on the Outstanding Universal Value of the World Heritage Property of Royal Domain of Drottningholm Sweden. The Swedish National Heritage Board.

In the attempt of applying the ICOMOS Guide to a city, different from the ones that were the studio cases, it emerged, first of all, that it lacks the criteria that allow to make an objective evaluation, for discovering the value of the tangible and non tangible goods of the heritage, cause each city has different own characteristics.

Consequently we made a further reflection on the results got from this application, to understand if the benefits/costs analysis can be integrated in the HIA method, in order to estimate in a monetary way, the economic impacts derived from the big projects of urban requalification, that regarding the UNESCO heritage.

From this, the needing to improve and integrate this evaluation tool, that nowadays, is able to evaluate only the cultural impacts of the big projects of urban requalification, trying to understand if the benefits/costs analysis can be integrated into the HIA, as a tool capable of evaluating in monetary terms, the success of a big requalification project.

Following what we said, we have studied some good practices, to discover a series of indicators capable of monitoring in an economic, social and cultural key, the success of a requalification project.

From the analysis of the good practices, among these the most significant ones are Toronto, Bath, Skopje and Baltimore, we have extrapolated a series of key indicators referred to six different fields: touristic economy, creative and cultural economy, industrial economy, environmental economy, real estate value economy and social economy,

This indicators allow us to predict and monitor the success of a big requalification project and to foresee, for each survey fields of the ICOMOS Guide, which will be the economic, social and cultural benefits resulting from a certain development action.

## **THE TOOLS GIVEN BY THE UNESCO AND ICOMOS FOR THE PRESERVATION AND ENHANCEMENT OF THE HISTORIC URBAN LANDSCAPE OF THE COASTAL CITIES.**

The sea cities cover a wide records that goes from a small fisherman suburb to the port metropolis, from the lagoon city to the ones built on artificial canals. The historic port-cities very often expose strictly to the open sea, on interior waters or even on rivers or canals linked to the sea.

Man during the time, has changed and transformed the cost according to his needs, his desires, glimpsing in the free area along the cost, new spaces for localizing the industrial activities.

Following the economic crisis, it happened an abandon of this areas, left in a state of particular degradation, generating a real barrier between cities and sea.

The intense exploitation of the coast, followed by the lack of suitable planning activities, has negatively affected, not only on the landscape environmental heritage, but also on the cultural one.

In this scenario is immersed the South Italy, well known for its problems as, the lack of physic infrastructure, the inadequate specialization of the services, the lack of participation to the realization of the different projects and in the end the, the institutional fragility.

This is a widespread problem, that affects even the cities that are UNESCO Sites, in which it has been considered opportune to define some development and requalification plans of the waterfront, with the priority of the preservation of the heritage endowed with "Outstanding universal value" (OUV).

For this purpose the waterfront requalification projects of cities as Dilmun, Lunenburg, Valparaiso, Cartenga, Bordeaux, Lubeck, Stralsund, Wismar, di Rhodes, the City of Valletta, of Oporto and of Liverpool, represent a "good practice" to refer for understanding how to deal with a big requalification project, respecting the material and non material value of the UNESCO heritage (Genovese 2012).

From the analysis of the state of the art we deduce that a “winning” strategy for the regeneration of the coastal cities is that of restarting from the requalification of ports and waterfronts, identified as exchange and communication places, capable of bringing economic, social and environmental advantages.

Without doubts in the Mediterranean Sea, the renewed attention to the waterfront regeneration has received a strong push from the extraordinary success of other operation of big relevance, as the interventions on the waterfronts of Genova, Marseille, Valencia, and Salerno. These operations has clearly showed as the

“rediscover” of the sea in contexts that have, *de facto*, denied this element, could allow to take back the interests and attention on the cities.

The port and the industrial settlements have represented for years, a sort of diaphragm between cities and sea; so the recapture and enhancement of the reconciliation with the water, it was considered a strategic action for the environmental and economic relaunch (and also of image) of the entire urban reality.

An emblematic case of what we said it happened in Barcelona, considered the most attractive city of Europe, thanks to the changes started with the planning process began at the end of the 80's.<sup>3</sup>

In 1997 Barcelona it is declared “World Heritage” from the UNESCO, for the presence of historic-architectonic monuments of incredible value, among which those of Antoni Gaudì, Virreina Palace, the Bougeria market, the theater of Llicen and many others. The ancient port and the adjacent beaches have represented for years, the commercial heart of the city, because they hosted the fishing activities and different forms of economic exchange.

Today Barcelona is an international metropolis, that used many tools and methods for assure a correct “Urban Governance” (Ridolfi *et al.*, 2011).

From the analysis of the good practices listed above, we understood that many times, the redevelopment projects of the urban waterfront, coincide with areas endowed with OUV, registered therefore into the List of World Heritage.

For this reason it has analyzed the most recent recommendations of the UNESCO, regarding the preservation of the “Historic Urban Landscape” and the operating tools for evaluating the potential impacts of the great requalification projects on the heritage.

For reaching the definition of the “Historic Urban Landscape” it has passed during the centuries, to an evolution of the concept, thanks to a continuous question on how to deal with this heritage of such importance, that represents the history of the city.

Initially the concern was to understand which could be the tools to preserve and restore the historic monuments, until the concept of preservation it has extended to the urban scale, because an historic monument doesn't have reason to exist if it is detached from the context in which it lives.

The historic approach it was based on the preservation of the tangible heritage for passing on the next generation, we refers so to the monuments, buildings, faces and sculptures.

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<sup>3</sup> Of considerable importance is the process of urban regeneration, made by the city of Barcelona, which must be given credit for having been able to adopt an strategic ambitious and innovative plan, able to balance the needs of the cultural revival and equity, with the economic revival of the country. The retraining course begins with the decentralization of port activities incorporated within the urban center, to areas more suitable and far from the city. Barcelona takes advantage of the significant funding provided in the Olympic Games of 1992 to modernize the sports facilities, but also to take action on the sea front, distributing works and infrastructure on many neighborhoods of the city, both in central areas than in peripheral. Cfr. Ridolfi E., Valdevira M. (2011), “Evoluzione e Prospettive per il Waterfront di Barcellona”. Portus Plus.

During the time, the definition of the cultural heritage it is extended, considering not only the tangible heritage as resource, but also the "intangible heritage", linked to the traditions of the place, to its identity and culture.

For this purpose it is defined a new approach, called "Landscape Based Approach", that has three really important objectives:

1. The preservation is considered as a tool able to preserve the tangible and non-tangible heritage of a city.
2. An approach that reflects on how to reduce the negative impacts of the big development projects on the historic centers.
3. The Guide lines on how can be integrated in the best way, the urban development and the management of the heritage.

The intergovernmentative and non governmentative organizations started so to understand the recommendations of the UNESCO, defining some actions to follow them, through the draft of international documents of big value as: The European preservation of the Landscape (Florence 2000), the Memorandum of Vienna (UNESCO 2005), The Valletta Principles (ICOMOS, 2011), Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS, 2011)<sup>4</sup> and many others.

These documents offer the tools for a correct preservation of the heritage, in the specific, on how adequate the development plans of the cities, to the new politics of management and preservation of the historic urban landscape.

We arrived during the time, to the UNESCO recommendations of the Historic Urban Landscape of 2011, (UNESCO 2011),<sup>5</sup> that have as objectives, that of giving a guide to improve and assure the preservation of the historic urban landscape. This is a tool that encourage the local administrations to consider the HUL approach into the development politics, into the territorial planning and into the redevelopment of the historic city center.

This systemic approach is reinforced, moreover, from the most recent category of the HUL (ICOMOS 2011), that refers to the concept of context, for underling the systemic interconnection between the economic, social, environmental and cultural factors with the dimension of the immaterial heritage.

It becomes obvious, so, the need of realizing adequate tool for the strategic management that it could able to understand, interpret and enhance the richness of the diversity and of the complicated different variables of the territory: environment, economy, social relationship, knowledge, production, and so on. A process of reasonable management of the changing (Bandarin and Van Oers, 2012), that wants to be recognizable, reliable, efficient and sustainable, must be able to define the configuration of a residence system, respecting the consolidated value and potentiality of the territory, of its cultural heritage, of its environmental system and of its producing potential, assuming the richness of its complexity as matrix of sustainable development.

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<sup>4</sup> The only address methodological official ICOMOS, alleging management changes related to the cultural heritage, is the Guide to the Impact Assessment for Cultural sites inscribed on the World Heritage List. This document was created as exceeding the Environmental Impact Assessment, considered not suitable for the cultural heritage, as disaggregates individual attributes and assesses the impacts separately. Cfr. ICOMOS (2011), *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*.

<sup>5</sup> The new category of "Historic Urban Landscape" ( HUL ) proposed by UNESCO confirms a progressive enlargement of the concept of landscape, not only in quantitative terms (the territorial dimension in which to insert this conservation action), but also in qualitative sense, because of the multiplicity of elements (belonging to both material and immaterial assets) to be examined. Cfr. UNESCO (2011), *Recommendation on the Historic Urban Landscape (HUL)*, Parigi, Francia.

## **“HERITAGE IMPACT ASSESSMENT” (HIA) AS TOOL FOR EVALUATING THE IMPACTS OF THE GREAT REQUALIFICATION PROJECT ON THE URBAN WATERFRONTS”**

For evaluating the impacts of the great requalification project on the urban waterfronts, it is chosen the only official methodological address of the ICOMOS, pertinent the management of the changes related to the cultural heritage, as well as the “Guide of the Cultural Impacts Evaluation” (HIA), for sites enrolled to the World Heritage List (ICOMOS 2011). This document was born as passing of the Environmental Impact Evaluation, considered non usable for the cultural heritage, because doesn't unite the single attributes and it separately evaluates the impacts.

This method does not use community and social impact methods, as the "Community Impact Assessment" (VIC) and "Community Impact Evaluation" (CIE) created by Liechfield<sup>6</sup>, but was been exclusively developed to assess the impacts of great projects on cultural heritage, which might lose some features during the redevelopment.

This method is exclusively used for evaluating the impacts of the great projects on the cultural heritage, that it could lose some characteristics during the requalification interventions. This new approach doesn't use methods of community and social impact, in fact from a deep analysis, emerges the necessity of integrating it with new tools that allow to evaluate, at 360 degrees, all the impacts of a big requalification project.

Starting from a need of a global approach, then, the guide provides a methodology to allow the impact evaluation on the heritage, considering the “attributes” that realizing the particular interest of the heritage as separated entities and evaluating them in a systemic and coherent way. The “weigh” of the cultural heritage, into the evaluation of the impacts caused by the changes linked to the development strategies, is proportionate to its “value” and on the basis of this process becomes fundamental the comprehension of the values, of the significance, of the context, of the attributes (tangible and non tangible) and their relationship. The link among the attributes and spatial components, becomes so, the element on which is based the evaluation of the impacts on it.

The determination of the importance of a resource is considered through the tabs given by the ICOMOS in the appendix 3A, that allow us to determine the value of a resource following the quality criteria, through an evaluation scale based on 6 points:

Very High; High; Medium; Low; Negligible; Unknown.

This scale of evaluation is considered applicable on different typologies of heritage: archeological sites, heritage built or historic urban landscape, historic landscape, intangible heritage or associations; for each one, the ICOMOS gives us the definition for different levels of importance (ICOMOS 2011).<sup>7</sup>

Moreover, the guide, gives indications both on how to evaluate the entity of change (grade of impact) on a specific attribute, and on how to evaluate the significance of a change effect (that can be positive or negative) on a specific attribute, according the importance of the attribute and the entity of the change.

The entity of the change is measured through an evaluation scale of 5 points: No change; Negligible change; Minor change; Moderate change; Major change.

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<sup>6</sup> The CIE, proposed by Lichfield in the 60s, is an evaluation methodology in multi able to identify the effects of a redevelopment project on different social groups, simultaneously evaluating the cost effectiveness of the same. See. Cfr. Lichfield N. (1997), *Measuring the success of partnership endeavors*.

<sup>7</sup> For the definition of the scale contained in Appendix 3A, which assign value to goods, ICOMOS considered the characteristics of the assets ranging from international to local. Were also taken into account all international programs governing the protection and conservation of urban heritage. Cfr. ICOMOS (2011), *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*.

The relevance of a change effect is measured, instead, through a scale 9 points, in which neutral is considered as a medium value, Major beneficial, Moderate beneficial, Minor beneficial, Negligible beneficial, Neutral; Negligible adverse; Minor adverse; Moderate adverse; Major adverse.

The evaluation methodology of the cultural impacts proposed by the ICOMOS, is based so on the mix of the attributes of the site and of the development, and it's finalized to the individuation of the dynamics impacts of the changes on the heritage and on the consequently individuation of the methods for avoiding/mitigating/compensating these effects.

In particularly, what results evident is that the Guide proposed by the ICOMOS focuses a lot on the efficiency of the procedure rather than on the results waited on a protection point of view of the heritage attributes (Pereira Roders *et al.* 2013) and then, still remains opened the need of a global approach, more objective, to the Historic Urban Landscape, an approach that considers the relationship between attributes and values also in context of different development.

This approach based on values, underlines the need of an action field wider and more complex, linked to the management of the Historic Urban Landscape, in which also the preservation must be considered as a "dynamic process of the change management" (ICOMOS Australia, 1999), including the attributes that transmit the heritage, the values that define it and their relationships that represent the cultural significance, basing, in their comprehension, also on the participative dynamic (Mason, 2010).

Therefore, is in the direction of the practice implementation of the "*Landscape Based Approach*", through methods and appropriate tools, that it is orientating the international research in the last years, moving the attention always more towards the evaluation of the impacts linked to the development dynamics of the places, on the meanings included in the Historic Urban Landscape, rather than on the preservation of the object itself.

From a deep investigation of the "good practices" of Liverpool (De Figueiredo, 2011) and Stockholm (Lisitzin, 2012), where the method of the "Heritage Impact Assessment", was applied to assess the impacts of the major urban redevelopment projects, shows that from 2011 to the present day, this tool has been interpreted and applied differently by various local institutions, considering it essential for the urban planning decisions.

The most important study cases considered were those of Liverpool and Stockholm, where the ICOMOS Guide has been applied in a clear and exhaustive way, according to different scales of strategic planning (as the urban planning scale, the territorial scale and the project scale), for evaluating the impacts of the "new architecture".

The city of Liverpool is the place where the adoption of this instrument, has brought great results, in compliance with the recommendations of the ICOMOS.

For this reason, this application has been taken into consideration for estimating the impacts of the Pompeii Great Project, on the heritage along the waterfront of Torre Annunziata.

## THE INSTRUMENT OF THE "HERITAGE IMPACT ASSESSMENT" APPLIED TO THE CASE STUDY OF TORRE ANNUNZIATA, A COASTAL TOWN ON THE GULF OF NAPLES

The ICOMOS Guide "*Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*", was applied as a tool to assess the impacts of the "Pompeii Great Project" on the waterfront of Torre Annunziata and on the axis sea-archaeological excavations.

The city covers an area of approximately 7.33 square kms and 6 kms of seafront, is situated in the center of the Gulf of Naples, endowed with an industrial district in the eastern part of the city, which covers about 200 hectares and 2,5 km of beaches, that today goes through a conditions of significant degradation, due to the abandonment of many industrial activities (Figure 1).



Figure 1 Waterfront Torre Annunziata (Source: [www.ucina.net](http://www.ucina.net), [www.metropolisweb.it](http://www.metropolisweb.it))

Despite this, the city is endowed with a very picturesque landscape, with interesting historical proofs and shipyards still operating, which still represent factors of attractiveness. In addition, the old town comes up with an interesting traditional urban structure and with important historical buildings (Gravagnuolo *et al.*, 2015).

The port of Torre Annunziata is one of the most important ports of the Campania Region, the fourth after those of Naples, Salerno and Castellammare di Stabia and the third for handling after Naples and Salerno.

It has several areas devoted to shipbuilding and other manufacturing industries.

The goal of the Pompeii Great Project is to create a cultural tourist district, outside the walls, in order to enhance the tourist offer of the archaeological excavations of Pompei and Torre Annunziata, proposing to the visitors new services according to the needs of the international tourism (Russo, 2011).

Along the waterfront it will be built hotels, restaurants, bars and all kinds of activities for leisure, to complete the local and regional tourist offer.

To establish the methodology of this study, as mentioned, we have been studied a series of the best practices, with the aim to develop a clear vision on how this tool can be used, and adapted to the different international contexts.

The methodology proposed for the application to the Pompeii Great Project, is mostly inspired by the case of Liverpool, considered, initially, the most complete and effective, and secondly the most suitable to the research work in question, given the similarity between the two projects, involving the redevelopment of a sensitive area of the city as the coastline.<sup>8</sup>

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<sup>8</sup> The redevelopment of the waterfront of Torre Annunziata is expected within the Pompeii Great Project, where we can see in the port city a point of entry "from the sea" of Pompeii. The area is now occupied by 6 km of coastline into disuse, characterized by the presence of many abandoned industries, which have left major problems of soil and sandy shores. The methodology for evaluating the impact applied to the case of Liverpool, can be considered for the city of Oplonti, as we talk about two projects that link to the redevelopment of the areas occupied by the sea "industrial archeology".



They have been defined upstream, the different steps to follow, which can summarize as follows:

Step 1: Making a thorough reconnaissance of the UNESCO heritage - Pompeii, Torre Annunziata, Ercolano, trying to figure out:

- A. What are the heritage registered into the list of the world heritage;
- B. What were the criteria to entry in that list.

Step 2: Historic reconnaissance of the waterfront of Torre Annunziata and Pompeii through:

- A. A survey of historic buildings present on the waterfront of Torre Annunziata
- B. A careful cataloguing of archaeological heritage along the connecting axis sea-excavations.

Step 3: Description of the guidelines of the Pompeii Great Project

Step 4: Making an Heritage Impact Assessment on the waterfront, which includes the following steps:

- Evaluation of the direct and indirect impacts on the cultural assets found along the waterfront;
- Development of a summary matrix of the direct and indirect impacts on the cultural heritage;
- Assessment of visual impacts on key views;
- Development of a summary matrix of the impacts on views key - key views;
- Analytical results;
- Definition of the appropriate mitigation measures.

Step 5: Analysis of the results and mitigation actions.







Step 6: Proposal of a cost-benefit analysis to improve the method of the "Heritage Impact Assessment", with the aim of assessing the economic impacts, in monetary terms, resulting from a proposed redevelopment of the waterfront.

Defined the different methodological step, we moved to the goals of each of them. The preliminary phase of the work was to be aware of the different characteristics of the town of Torre Annunziata, where the most significant fact is its inclusion in the UNESCO World Heritage Lists, for the archaeological discovery of "Oplonti's excavation." They were part of the suburban area of Pompeii, buried as the city of Herculaneum in the eruption of '79.








After the analysis of the actual state of Torre Annunziata and the guidelines of the Great Pompeii Project (steps 1, 2, 3) (Russo, 2011) it has identified the different cultural heritage on which it can be asses the impacts of the Pompeii Great Project, through the development of tables that meet the guidelines of the ICOMOS guide.

In this regard, they evaluated the direct and indirect impacts on about thirty cultural heritage located along the waterfront, and on the Key-views, according to two key indicators (Table 1, Table 2):

1. Building and Fabric (buildings);
2. Setting and Context (context / landscape).

	CULTURAL HERITAGE	DESCRIPTION OF THE HERITAGE	VALUE OF CULTURAL HERITAGE Built Heritage or Historic Urban Landscape	REDEVELOPMENT PROJECT	IMPACTS ON BUILDINGS Built Heritage or Historic Urban Landscape	IMPACTS ON THE ENVIRONMENT Built Heritage or Historic Urban Landscape	SIGNIFICANCE OF EFFECT OR OVERALL IMPACT
1	ITALTUBI TORRE ANNUNZIATA	<p>The history of the metalworking industry of Torre Annunziata begins with the arms factory founded by the Bourbon in mid 18th century.</p> <p>The first industrial installation of this type, dating back to the 80s of the 19th century, when some entrepreneurs and financiers in France (A. Natanson, R. Duche, Gagnet M., F. D'Hautpoul), founded a modern iron and steel plant devoted exclusively to the processing of scrap metal, called before Natanson-Duche &amp; C. and then Ferriere of the Vesuvius.</p>	VERY HIGH	<ul style="list-style-type: none"> <li>• AREA EXPERIENCE</li> <li>• ORTO BOTANICO</li> <li>• LUNGOMARE ATTREZZATO</li> <li>• LIGHT TRAIN</li> <li>• PARKING INTERRATO</li> <li>• CANALE NAVIGABILE</li> </ul>	MAJOR BENEFICIAL (9)	MAJOR BENEFICIAL (9)	MAJOR BENEFICIAL 9+9/2=9
			Other buildings or urban landscape of recognized international importance		Change to key historic building elements that contribute to OUV, such that the resource is totally altered.	Comprehensive changes to the setting	VERY LARGE BENEFICIAL
2	DERIVER TORRE ANNUNZIATA	<p>Deriver Torre Annunziata</p> <p>The Deriver, former big engineering industry, was connected directly to the station of Central Torre Annunziata.</p> <p>Within the industry the tracks were also used to interchange between trains and ships thanks to a pier equipped with tracks that winds into the sea.</p> <p>To transport the cars were used small electric locomotives.</p> <p>The terminal part of the pier was in iron, while the initial part was made of reinforced concrete.</p>	VERY HIGH	<ul style="list-style-type: none"> <li>• AREA EXPERIENCE</li> <li>• ORTO BOTANICO</li> <li>• LUNGOMARE ATTREZZATO</li> <li>• LIGHT TRAIN</li> <li>• PARKING INTERRATO</li> <li>• CANALE NAVIGABILE</li> </ul>	MAJOR BENEFICIAL (9)	MAJOR BENEFICIAL (9)	MAJOR BENEFICIAL 9+9/2=9
			Other buildings or urban landscape of recognized international importance		Change to key historic building elements that contribute to OUV, such that the resource is totally altered.	Comprehensive changes to the setting	VERY LARGE BENEFICIAL
3	DALMITE TORRE ANNUNZIATA	<p>The area Dalmine, can be considered as a former industrial engineering of Torre Annunziata, located in Via Terragneta. Small factory, next to the coastline, which has undergone many changes in function over time.</p>	LOW	<ul style="list-style-type: none"> <li>• AREA EXPERIENCE</li> <li>• BOTANICAL GARDEN</li> <li>• EQUIPPED WATERFRONT</li> <li>• LIGHT TRAIN</li> <li>• UNDERGROUND PARKING</li> <li>• NAVIGABLE CANAL</li> </ul>	MAJOR BENEFICIAL (9)	NEUTRAL (5)	MINOR BENEFICIAL 9+5/2=7
			Historic (unlisted) buildings of modest quality in their fabric or historical associations		Change to key historic building elements that contribute to OUV, such that the resource is totally altered.	No change on setting	NEUTRAL BENEFICIAL

**Table 1** Heritage Impact Assessment on direct and non direct impacts on Torre Annunziata waterfront (Source: Author's elaboration)

	VIEWS KEY WATERFRONT	HISTORIC BUILDINGS IN THESE KEY VIEW	VALUE OF CULTURAL Historic Landscape Historic Landscape	REDEVELOPMENT PROJECT	IMPACTS ON THE LANDSCAPE Historic Landscape	IMPORTANCE OF IMPACT OR IMPACT COMPREHENSIVE
1	TORRE ANNUNZIATA VIEW OF THE PORT	<ol style="list-style-type: none"> <li>Sanctuary Of Spirit Torre Annunziata;</li> <li>Bridge Bourbon;</li> <li>Historical pasta manufacturing;</li> <li>Basilica SS. Mary Snow;</li> <li>Port of Torre Annunziata</li> </ol>	VERY HIGH	<ul style="list-style-type: none"> <li>WATERFRONT EQUIPPED</li> <li>PORT REDEVELOPMENT</li> </ul>  <p>Modifiche minori che rendono chiave paesaggio storico elementi, pacchi o componenti ; effetti visivi praticamente invariato ; molto lievi variazioni livelli di rumore o la qualità del suono ; molto lievi modifiche di utilizzo o l'accesso ; risultando in un molto piccolo cambiamento di carattere storico del paesaggio</p>	NEGLIGIBLE BENEFICIAL	SLIGHT BENEFICIAL
			Historic landscapes of international value, whether designated or not.		Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.	
2	HARBOUR VIEW FROM DOWNTOWN	<ol style="list-style-type: none"> <li>Port of Torre Annunziata</li> </ol>	VERY HIGH	<ul style="list-style-type: none"> <li>WATERFRONT EQUIPPED</li> <li>PORT REDEVELOPMENT</li> </ul> 	NEGLIGIBLE BENEFICIAL	SLIGHT BENEFICIAL
			Sites or structures of acknowledged international importance inscribed as of universal importance as WH property.		Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.	
3	VESUVIUS VIEW FROM THE SEA	<ol style="list-style-type: none"> <li>Sanctuary Of Spirit Torre Annunziata</li> <li>Bridge Bourbon</li> <li>Historical pasta manufacturing;</li> <li>Basilica SS. Mary Snow</li> <li>Port of Torre Annunziata</li> </ol>	VERY HIGH	<ul style="list-style-type: none"> <li>WATERFRONT EQUIPPED</li> <li>PORT REDEVELOPMENT</li> </ul>  	NO CHANGE	NEUTRAL
			Landscapes of acknowledged International importance inscribed as WH property.		No change to elements, parcels or components; no visual or audible changes; no changes in amenity or community factors.	

**Table 2** Heritage Impact Assessment Key views on Torre Annunziata waterfront (Source: Author's elaboration)

Completed the assessment phase through the processing tables, the results were analyzed through the method of the frequency analysis. Subsequently, we elaborated more tables for relating the negative impacts with the actions of the project in order to determine appropriate mitigation actions (Table 3).

	IMPACTS	MITIGATING ACTIONS
<b>EVALUATION DIRECT AND INDIRECT IMPACTS ON CULTURAL HERITAGE ALONG THE WATERFRONT</b>		
1	They were found negative impacts arising from the construction of too high buildings along the waterfront, which could obscure the perception of the old town behind it, hiding the iconic buildings.	These effects can be mitigated by providing appropriate "urban standards" to regulate the height of new buildings.
2	They were found negative impacts, resulting from the few links between the old town, the area of the waterfront and harbor.	These impacts can be mitigated through the provision, already in the planning stage, of new strategic links between the sea and the old town.
3	The redevelopment of Dalmine area of Torre Annunziata has a neutral impact, resulting from the few activities.	These neutral effects can be mitigated by giving a greater meaning to this area very close to the waterfront, through the definition of new purposes.
4	They were found neutral impacts for the redevelopment of the Oplonti's thermal baths. The project doesn't involve the redevelopment of these areas.	These neutral effects can be mitigated through a "dedicated project" to the redevelopment of the baths, capable of improving the city's tourism.
5	The redevelopment of the S. pasta factory near the waterfront of Torre Annunziata is not included in the project.	These negative effects can be mitigated through a project to restore the historic building, reconvertng its functions.
<b>VISUAL IMPACT ASSESSMENT VIEWS ON KEY - KEY VIEWS - WATERFRONT</b>		
1	View of the Vesuvius from the harbor and waterfront.	These effects can be mitigated, with appropriate "urban standards" to regulate the height of new buildings
2	View from the waterfront of the shipyards.	These effects can be mitigated through appropriate redevelopment of shipbuilding activities in order to improve their visual perception.
3	View of the church SS. Mary of the Snow.	These effects can be mitigated, with appropriate "urban standards" to regulate the height of new buildings. In particular, we should be very careful to not deny the view from the scenic waterfront of the church and behind Vesuvius.
4	View of the Villa Filangieri.	These impacts can be mitigated through the enhancement of the eighteenth-century villa from the seaside also providing guided tours along the sea to reach a small bay that is very impressive.
5	View of the old town from the port.	These effects can be mitigated by providing appropriate "urban standards" to regulate the height of new buildings.
6	View of Oplonti's thermal baths from the waterfront.	These negative impacts can be mitigated through the upgrading of spas located along the waterfront. In this way, the visual perception of a very important historical building can help to improve the waterfront.
<b>EVALUATION OF DIRECT AND INDIRECT IMPACTS ON CULTURAL HERITAGE ALONG THE AXIS SEA- POMPEII EXCAVATION</b>		
1	The redevelopment of the area next to the excavations can cause negative impacts on the archaeological finds, referring to pollution, noise, vandalism, the intensive presence of mass tourism. These impacts can happen especially on the heritage along the two access axes to the archaeological Site.	These negative impacts can be mitigated through a rehabilitation, management and monitoring project of the possible negative impacts, providing the appropriate barriers to the preservation of the heritage concerned.
<b>VISUAL IMPACT ASSESSMENT OF THE KEY VIEWS - KEY VIEWS - AXIS SEA- POMPEII EXCAVATION</b>		
1	The redevelopment of the area next to the excavations can cause negative impacts on the visual perception of the excavations along the two axes of connection with the sea and the hinterland.	These impacts can be mitigated through an appropriate redevelopment project that keeps alive the relationship with the environment and the perception of the archaeological site

**Table 3** Impacts-mitigation actions (Source: Author's elaboration)

After analyzed the best practices and the application made on the Pompeii Great Project, to assess the impacts of redevelopment, they have identified the strengths and weaknesses of the Guide ICOMOS, compared to the application made in Liverpool and Torre Annunziata, to understand the critical instrument of HIA (Table 4).

LIVERPOOL	TORRE ANNUNZIATA
<b>Strengths</b>	
<ol style="list-style-type: none"> <li>1. Deep analysis of the UNESCO heritage;</li> <li>2. Deep historic analysis of the merchant marine and of the docks along the river Mersey;</li> <li>3. Deep analysis of the steps to follow;</li> <li>4. Deep analysis of the ICOMOS Guide of 2011;</li> <li>5. Connection to the urban plans that rule the waterfront development;</li> <li>6. Deep report to understand the different working steps.</li> </ol>	<ol style="list-style-type: none"> <li>1. Deep analysis of the UNESCO heritage;</li> <li>2. Deep historic analysis of the merchant marine of Torre Annunziata;</li> <li>3. Deep analysis of the steps to follow;</li> <li>4. Deep analysis of the ICOMOS Guide of 2011;</li> <li>5. Connection to the urban plans that rule the waterfront development;</li> <li>6. Deep report to understand the different working steps;</li> <li>7. Elaboration of the tables in a clearer way than the case of Liverpool;</li> <li>8. Connection into the tables to the visual image of the redevelopment project;</li> <li>9. Imminent description of the impacts on the urban landscape;</li> <li>10. Using of colors that help the comprehension of the ICOMOS Guide.</li> </ol>
<b>Weakness</b>	
<ol style="list-style-type: none"> <li>1. It lacks a scientific way for analyzing the data;</li> <li>2. It lacks an immediate reading of the heritage value;</li> <li>3. It lacks a knowledge of the heritage through the sensibility of the citizens;</li> <li>4. Data analysis not completely clear;</li> <li>5. Evaluation of the impacts on the planning scale;</li> <li>6. It lacks the connection to the urban plans that regulate the development of the territory;</li> <li>7. Evaluation scale of the heritage values not really clear.</li> </ol>	<ol style="list-style-type: none"> <li>1. It lacks a scientific way for analyzing the data;</li> <li>2. It lacks an immediate reading of the heritage value;</li> <li>3. It lacks a knowledge of the heritage through the sensibility of the citizens;</li> <li>4. Data analysis not completely clear;</li> <li>5. Evaluation of the impacts on the planning scale;</li> <li>6. It lacks the connection to the urban plans that regulate the development of the territory;</li> <li>7. Evaluation scale of the heritage values not really clear.</li> </ol>
<b>Opportunities</b>	
<ol style="list-style-type: none"> <li>1. A good practice to follow for evaluating the impacts of the big requalification projects of the urban waterfronts;</li> <li>2. Improving the tool through an integration of the data analysis more detailed;</li> <li>3. Improving the tool through the support of a participative method;</li> <li>4. Good practice for elaborating a report for spreading the experimented method.</li> </ol>	<ol style="list-style-type: none"> <li>1. A good practice to follow for evaluating the impacts of the big requalification projects of the urban waterfronts,</li> <li>2. Improving the tool through an integration of the data analysis more detailed;</li> <li>3. Improving the tool through the support of a participative method.</li> </ol>
<b>Threats</b>	
<ol style="list-style-type: none"> <li>1. Application of the method, very often reduced only to the planning scale</li> <li>2. To avoid of applying, in a servile way, this method, because of it was considered one of the best</li> <li>3. Always keep in mind that the ICOMOS Guide must be adapted to the different international contexts</li> </ol>	<ol style="list-style-type: none"> <li>1. Application of the method, very often reduced only to the planning scale</li> <li>2. To avoid of applying in a servile way this method, because of it was considered one of the best</li> <li>3. Always keep in mind that the ICOMOS Guide must be adapted to the different international contexts</li> </ol>

Table 4 Swot Analysis HIA Liverpool-Torre Annunziata (Source: Author's elaboration)

The first reflection was born after reading the recommendations HUL of 2011 (UNESCO, 2011), that clearly specify that this instrument should be adapted to the various international contexts, knowing that they have different characteristics for culture, traditions and Urban stratification.

The archaeological, cultural and landscape heritage of the different countries, are placed in completely different contexts, and for that reason the tool provided by the ICOMOS, cannot be applied in a static way.

Overcome this problem, the attention was focused on the economic impacts of the project actions, which are in no way, assessed into the analyzed study cases; so it is not clear what will be the costs for the construction of each action, nor the future economic benefits.

Hence the need to improve and make operating in the best way, the instrument of the "Heritage Impact Assessment", in order to develop a methodology for evaluating different aspects of the actions of a large redevelopment project, referring both to the economic and cultural ones.

Having a clear picture of all the benefits of the project actions, is a winning strategy, as analyzing the table that is, at the same time, able to estimate the importance of a resource, the degree of magnitude of the impact and the economic benefits arising from the redevelopment of an area, is a very useful operation, able to bring, the choices of strategic planning, towards the success.

This method is differs from the methods CIA and ICE, because it is focuses exclusively on the assessment of impacts on cultural heritage deduced from a redevelopment project, through the use of specific criteria, proposed by ICOMOS.

Hence the need to propose cost-benefit analysis to assess the economic impacts arising from the redevelopment of a "sea town", UNESCO site.

After the Second World War, the rehabilitation of public buildings endowed with particular historical and landscape value (including UNESCO sites), starts to be seen as the key to the success, to improve, at the same time, the condition of the historical heritage and the economic situation of the city.

For this reason, it supports over the time, the idea of bringing forward the cost-benefit analysis, to quantify the economic benefits of public policies.

Further analyzing the tool provided by the ICOMOS, we have realized that it would be necessary to assist the evaluation of the impacts of major redevelopment projects on heritage with "Outstanding Universal Value", also a thorough cost-benefit analysis, to understand what will be the actual costs for the implementation of interventions, and future benefits, related to the relocation of an UNESCO Site.

It is important to understand what is the "economic significance" of heritage, as they can improve the economy of the city, referring to the economy of tourism, real estate, creative economy, handcraft, industrial economy, the environment and social economy.

This aim is achieved with the traditional method of cost benefits analysis, through which we can identify a set of economic indicators, with the ultimate aim to quantify the real benefits of the redevelopment action of Torre Annunziata's waterfront, in order to have clear, the effective economic grow of the city.

The following economic, financial, social and environmental tools we proposed, represent the possible strategies to implement the approach HUL.

This economic model, putting in stable symbiotic relationship landscape and businesses, wants, on one hand, to enhance the productive activities of the territory, on the other hand promote the diversification of functions, the whole, in order to reduce the conflict between the demands of conservation and the transformation of the heritage.

This economic mechanism allowing the monetary quantification of the investment risks, offering more guarantee to the investors, who will thus have an incentive to invest capital.

The awareness for investors, to be able to count on the return of the invested capital plus interest, in a long-term period, is not only a stimulus to investment, but also presents the advantage of ensuring the conservation of the environmental, historical and cultural landscape through the so-called "active protection". The instruments of the "public-private social" have assumed an important role in these processes (McDonald and Cheong, 2014).

We can say that the management of the "Historic Urban Landscape" transformation, requires innovative ways to involve different social groups (promoters, operators and users), and provides empirical evidence of economic, social and environmental values and conservation attributes of the architectural, urban and environmental heritage. The conservation does not therefore represent a cost, but an investment able to generate sustainable development. The evaluation of the impacts of investments in conservation actions require appropriate indicators and evaluation tools.

To demonstrate the suitability of the investments into the conservation of the urban cultural heritage and landscape it must use assessment methods that integrate the traditional cost-benefit approach, including the social and environmental dimension in the impact analysis.

In this perspective, the objective of this work is to understand how to improve the instrument of "Heritage Impact Assessment", through cost-benefit analysis to evaluate what can be economically advantageous, the redevelopment of urban waterfronts, UNESCO site.

So it will be necessary to evaluate not only the direct and indirect impacts on cultural heritage, as required by the Guide ICOMOS, but also the economic impact resulting from the actions of the project, evaluating in terms that will bring economic prosperity to the city, then jobs and social regeneration.

For this reason were examined outstanding issues of the literature reference (Licciardi, 2012) and study case of international good practices (Baltimore, Toronto, Skopje, Tbilisi, Bath, Lille), to understand how the conservation and restoration of the cultural and landscape heritage, can bring significant economic impacts on the World Heritage city.

The work methodology offered, take part of a research project sponsored by the Interdepartmental Research Center "Alberto Calza Bini", entitled "*Towards operationalising UNESCO Recommendations on Historic Urban Landscape*", organized by Prof. Fusco Girard and Peter Nijkamp. The work carried out by the research group was defined as follows: "Economic Evaluation Tools for the regeneration of HUL and Heritage". The attention was focused on the identification of specific indicators to assess the actual economic benefits of development projects, affecting UNESCO Sites. In this sense they have been analyzed study cases of international good practice, trying to extrapolate from each one, key indicators to monitor and assess the economic and non economic benefits, resulting from the redevelopment of the UNESCO Sites.

Cultural heritage is interpreted as an engine for the production of value not only strictly cultural, but also social, economic and environmental; "It is increasingly recognized as an important economic resource in the global competition" and contributes to economic and social development of the city.

For this reason, we have identified a number of indicators by which to evaluate assistance in order to convince people that the regeneration/conservation of cultural heritage, should be convenient also economically and that, therefore, there is a symbiosis between conservation and development.

There is no set of indicators valid in general, as they are the specific conditions of the place, the political preferences and socio-economic conditions that determine the relevance of each specific indicator in the decision process

The need is to build a multidimensional system of indicators, not only to the macro scale, but also to the micro ones, that is local, able to analyze endogenous processes and build new strategies of development on a human scale.

Experience shows that interventions on cultural heritage, tangible and intangible, can implement the search for new economies.

Success stories (Baltimore, Toronto, Skopje, Tbilisi, Bath, Lille), show that the integrated conservation has produced positive results and benefits for the quality of life and for the social and economic development of the city.

The cultural heritage is capable of producing capital gains, which increase economic productivity (not only directly related to tourism), contribute to the production of work, the increase in property values and the improvement of quality of life, generating a series of benefits that make attractor of new activities, investments, etc.

And we need to understand that cultural heritage is capable of producing wealth, labor, welfare, tourism etc. The only strategy is to understand, then, about the benefits and the economic impacts brought by the integrated conservation of cultural heritage.

New matrix, new evaluation methods resulting from cost benefits analysis, are required to demonstrate and convince private individuals, public and social subjects that the benefits produced by the integrated conservation of the cultural heritage, outweigh the costs and that, therefore, we can talk about investment.

Xavier Greffe argues that the cultural heritage generates positive effects in social and economic development. The arts are able to create and stimulate development, encouraging the opening of new markets, the creation of new jobs, to promote social integration and the ability to support local development.

Artistic activity, lately, is seen as a specific economic sector (Greffe, 2009).

In this regard, according to the interpretation of Rypkema is necessary to understand what is the economic value of historic sites and historic buildings. For years the rehabilitation of historic cities was seen as an action capable of generating positive economic impacts, but was not supported over the time, by baseline studies numerically capable of measuring these effects (Rypkema, 2003).

According to the theories of Randal Mason, the heritage is made of monuments and other values of extraordinary importance. America was conducted a research to understand how much the investments of the heritage redevelopment, are capable of bringing economic benefits to the city (Mason, 2010).

From the studies made on the city of Baltimore, Cleveland, Denver, Philadelphia, Portland, it is showed that the redevelopment projects of heritage have produced different economic impacts, in which the values were entered into a database.

The concept of sustainability requires that all analysis in the short and long term, for the management of the cultural capital, must be supported by an economic assessment of the possible future impacts.

The message is to consider cultural heritage as an asset made tangible and intangible values, considering all the different levels of its meaning, and should provide for proper management for the future.



## **THE EVALUATION OF THE ECONOMIC IMPACTS OF THE REQUALIFICATION PROJECT OF BALTIMORE WATERFRONT**

The city of Baltimore is a "good practice" when you want to analyze the benefits in terms of economic and social regeneration of the urban waterfront.

They have invested \$ 16,280,000 for the construction of new roads, bridges, stations near the waterfront.

The actions of the project were the following:

1. renovation of obsolete facilities of the ports, for both the pedestrian area and the vehicle accessible way along the waterfront;
2. reduction of the traffic congestion in some streets along the waterfront, promoting walking and cycling routes;
3. development of a boulevard along the waterfront with the design of two parks;
4. construction of a tower that connects the area with the TOD station;
5. recovery of some roads addressed to pedestrians and cyclists;
6. improving the safety and quality of life of the waterfront.

We speak then, of the redevelopment of Westport Baltimore, originally conceived as a mixed-use area, which was founded on the river of the Patapsco River.

The project aims to redevelop the area in a "green" key and have been estimated a number of very important benefits:

- 796 new residences;
- 900,000 square meters of new areas to be allocated to offices;
- 91, 500 square meters to be allocated to the increase of typical activities (shipbuilding);
- redevelopment in key green of all the parks along the waterfront;
- from 7300 to 12300 new homes;
- from 131 to 211 million square meters for mixed-use;
- from 17,900 to 21,900 new jobs;
- \$ 2.7 to \$ 4.1 million of new investments.

The forecast of the benefits of this major project involves the creation of 4,000 new jobs, of which 1,700 temporary.

For this reason was established a company called "Westport Community Partnership", to handle the positive benefits of the redevelopment project on the local community, especially as regards the increase in new jobs. The citizens interest is also to redevelop the residential areas next to the waterfront, making sure that even in these areas can be born new jobs, temporary and permanent, and the birth of new houses, built according to the criteria of sustainable architecture. A key objective of the project is to reduce the rate of CO2 emissions, improve the safety of the districts, making them livable and green.

This major redevelopment project aims to modernize the infrastructures, car parks, the redevelopment of the brownfield sites along the waterfront. And it is planned the realization of 200 luxury apartments, most of them along the waterfront area.

For each of these interventions were expected future economic benefits especially for the area of Middel Branch:

- 7,300 / 12,300 new homes;
- 13.1 / 21.1 million of public areas;
- 17,900 / 21,900 new jobs;
- \$ 2.7 to \$ 4.1 million of new investments (Westport Waterfront TOD, 2010).

The indicators that express quantitatively the economic benefits have been grouped into six broad categories of impact based on:

1. tourism and recreation economy;
2. creative and cultural economy;
3. industrial economy;
4. environmental and ecological economy;
5. social and civil economy;
6. real estate economy.

In this regard, we report the case of table Baltimore (Table 5).

<b>BALTIMORA, United States of America</b>

<i>Fonte: www.baltimore.com</i>
<b>Period of evaluation:</b> 2010
<b>Typology of the heritage:</b> Waterfront
<b>Objectives:</b> Benefits/costs analysis for monitoring the economic grow of the city, deriving from the requalification of the waterfront district
<b>Methods and tools for the evaluation:</b> benefits/costs analysis
<b>Site of control:</b> Westport Waterfront; Waterview Avenue TOD, West Covington, Acquario Naziona, MD 295

<b>COSTS</b>	
Costs of the project	
Improving of the MD 295 area	\$ 14,000,000
Improving of the local circulation and safety	\$ 16,220,000
Improving of the journeys	\$ 3,500,000
Improving the transit of pedestrians and cyclers	\$ 4,670,000
<b>TOTAL</b>	<b>\$ 39,770,000</b>
<b>COLLABORATIONS INTO THE FINANCING</b>	
Increase of the tax	\$ 12,550,000
City of Baltimore	\$ 2,080,000
State of Maryland	\$ 1,000,000
Private sector	\$ 2,710,000
<b>Total</b>	<b>\$ 18,340,000</b>
FHWA funds	\$4,338,000
FTA BUS GRANT	\$510,000
FY 2009	\$302,000
<b>Total</b>	<b>\$ 5,150,000</b>
Costs for the management of the waterfront	\$ 8,954,599
Costs for improving the transportation system	\$ 8,954,599

<b>ECONOMIC BENEFITS</b>	
<b>TOURIST AND RECREATIVE ECONOMY</b>	
New bedrooms in hotel	3,120
Area allocated to the realisation of new hotel	1,568,000
Area allocated to the realisation of casinò	250,000 mq
<b>CREATIVE AND CULTURAL ECONOMY</b>	
Qualified area to invest into the research field	180,000 mq
Support of specialists into the ICT sector	\$ 68,340
Organization of administrative database	\$ 60,256
Occupation into social and community services	96,990
Education, training and employment into the library	33,280
Selling and similar jobs	60,941
Qualified area to invest into the research field	34,133
Commercial and financial operations into the employment field	37,613
Support of specialists into the ICT sector	180,000 mq
Organization of administrative database	432
<b>INDUSTRIAL ECONOMY</b>	
Total profit in the office and industry field of the waterfront within 20 years	\$98,069,030
Direct output caused by the industrial economy of the waterfront	\$ 217,815,103
Total economic benefit within 20 years of the industrial waterfront field	\$ 348,047,228
Retrained areas for investing into the industry field of the detailed selling	1,044,710
Squared retrained meters for the born of new offices into the industrial field	2,874,000
Area allocated to the detailed commerce	1,044,710 mq
Area allocated to the industrial office	2,874,000
Numbers of working places into the field of the detailed commerce	2,507.
<b>ENVIRONMENTAL ECONOMY</b>	
Total of the areas requalified in a green key, in Westport zone	14,631,587
Reduction of the CO2 levels for year, for the residents of Westport zone	3.99
Reduction of the CO2 levels per year, for the commuters in the Westport zone	0,81
Monetary value of the CO2 reduction in the waterfront zone	\$ 2,221,667
Reduction of the cars use	22,8 %
<b>SOCIAL AND CIVIL ECONOMY</b>	
Numbers of accident reduced thanks to the improvement of the safety systems and infrastructures	5,83
Number of fatal accidents reduced in one year, thanks to the improvement of the safety systems and infrastructures	13,7
Reduction of the costs for restoring the places where accidents happened	\$ 27,066,784
<b>Total economic benefits related to the three field above</b>	

Reduction of the travelling costs	\$ 52, 863, 205		
Reduction of the travel time in terms of hours	40,3		
Total saving of the travel time in one year in terms of hours	31,933		
Economic benefits of these areas that don't depend on the global economy of the USA	\$ 13, 624, 084		
Numbers of commuters that take advantage from the reduction of waterfront costs	1,850		
Numbers of annual commuters that take advantage from the reduction of waterfront costs	7,236,979		
Squared meters allocated to the realization of the jobs	Offices	Retaill	Total
Number of the permanent job	900,400	91,533	991,933
Number of non direct job	3,782	173	3,955
Total number of direct and non direct job	6,583	25	6,608
Number of temporary job for the realization of the infrastructures	10,364	197	10,561
Number of job places for the realization of the requalification project			655
Direct annual profit			1,035
Total direct annual profit	\$ 227,290,463	\$ 3,810,606	\$ 231,101,069
Direct annual output	\$ 490,345,152	\$ 4,787,489	\$ 495,132,641
Total of the annual economic output	\$ 1,098,075,513	\$ 7,497, 849	\$ 1,096,573,361
Reduction of the travelling costs	\$ 1,740,236,142	\$ 10,192,938	\$ 1,750,429,081
Number of temporary job for the fulfilment of the infrastructures addressed to the residents of the suburban area			33
Total temporary job places for the suburban residents			52
Number of permanent job places for the suburban residents			85
Profit gained by the residents	189	9	198
Percentage of future hiring	\$ 11,364,523	\$ 190,530	\$ 11,555,053
Number of temporary job for the fulfilment of the infrastructures addressed to the residents of the suburban area			2.0%
<b>Future forecast of job places during one year</b>			
Direct job	3,782		
Total job	10,364		
Direct annual profit	227,290,463\$		
Direct economic output	\$ 1,089,075,513		
<b>Future forecast of job place within 20 years</b>			
Direct job	3,782		
Total job	10,364		
Direct annual income	\$4,545,809,265		
<b>REAL ESTATE ECONOMY</b>			
Total grow of the real estate value until 2015	\$ 519, 761,682		
1 % to attribute to the improving of the infrastructures	\$ 5,197,617		
Forecast of the 1 % grow of the real estate value within 20 years	\$ 52,863,205		
Destined areas to the realization of new residences	7,252,000		

**Table 5** The good practice of Baltimore (Source: Author's elaboration)

Using the best practices analyzed, it was shown that, the redevelopment of the heritage can generate significant economic impacts, in fact, thanks to the preservation of the heritage, it is possible to assure the city a steady source of income, that benefits the local and regional economy (Nypan, 2005 ).

The objective of this work was to identify a set of indicators, to define a methodological framework applicable and declinable depending on the specifics of each case examined, that is able to improve the instrument of Heritage Impact Assessment, evaluating in this way also the economic impacts resulting from a large redevelopment project.

The characteristics of the assets generate economic values that today are able to be measured, through the identification of a set of key indicators mentioned above.

They are considered a very useful tool to evaluate the performance of a city. The indicators will come in handy for communicating informations and make predictions about the future potential of a site. They can simplify the interpretation of complex systems by helping policy makers in future decisions for the city, while respecting those are the key principles of sustainability (Ost, 2010).

Through the study of this good practice, we were collected a series of indicators to assess the economic impacts of major redevelopment projects, useful to improve the instrument of Heritage Impact Assessment.

## **CONCLUSIONS AND RECOMMENDATIONS**

The success of the approach focused on the "Historic Urban Landscape" requires a strong background of innovative and interdisciplinary tools, able to adapt to different contexts, in order to protect the historical stratification of the natural and cultural values.

From the analysis of the relevant literature, there are still research studies currently being tested for the HUL method, focused mostly on aspects of methodology application, ignoring once again, the economic effect of the impacts on urban heritage.

The prospect of "integrated conservation of the historic urban landscape", as a central element for the sustainable development of the city, corresponds to the identification of new tools, such as integrated assessment, capable of recording all the quantitative and qualitative impact in the short, medium and long period.

In this research, among the operational tools was chosen the ICOMOS of 2011, in order to verify its methodology for the evaluation of the impacts of the major redevelopment projects. Assimilated the criteria for a correct application of the instrument, with the help of some good practices of reference, it was made an HIA to assess the impacts of the Pompeii Great Project on the waterfront of Torre Annunziata.

From this application have emerged negative impacts that led to the formulation of several mitigation measures, developed with the aim of improving the effectiveness of the project planned for the area of the waterfront.

From this application emerged some results on the possible criticality of this assessment tool, especially related to the lack of key indicators for assessing the economic aspects of the conservation and of the rehabilitation of sensitive areas.

Therefore we have studied some "best practices" in which they have been evaluated, through the indicators, the economic impacts of each intervention.

It was born so the need to incorporate the instrument through evaluation methods in which the quantitative economic matrix is enriched by qualitative indicators, representing the social and environmental components, adaptable to different local contexts.

In this way born a "conservation economy" of a wider spectrum, where you begin to assess the economic, social and cultural regeneration projects.  
 In conclusion we can say that it has been proposed a method of "Heritage Impact Assessment", called "Economic Heritage Impact Assessment" (EHIA), which meets all the criteria for a correct evaluation of the all possible impacts, generated by a redevelopment project of an urban waterfront (Table 6).


PUBLIC AND IDENTITIES SPACES - GREEN AREAS - WATERFRONT Sites heritage of acknowledged international importance inscribed as of universal importance as WH properties									
CULTURAL HERITAGE	DESCRIPTION OF THE HERITAGE	VALUE OF CULTURAL HERITAGE Built Heritage or Historic Urban Landscape	REDEVELOPMENT PROJECT	IMPACTS ON BUILDINGS Built Heritage or Historic Urban Landscape	IMPACTS ON THE ENVIRONMENT Built Heritage or Historic Urban Landscape	SIGNIFICANCE OF EFFECT OF OVERALL IMPACT	ECONOMIC IMPACT	SOCIAL IMPACT + INTANGIBLE BENEFITS	CULTURAL IMPACT + INTANGIBLE BENEFITS
REAL FABBRICA D'ARMI 	The Royal Arms Factory in Torre Annunziata was the largest arms factory of the Kingdom of the Two Sicilies. Founded in 1758 by Charles of Bourbon, in the process of seeking independence from foreign military supplies, both manufactured firearms, that weapons, and served as a center for assembly of parts from other factories.	VERY HIGH	1 WATERFRONT EQUIPPED 2 PORT REQUALIFICATION	MAJOR BENEFICIAL (9)	MODERATE BENEFICIAL (8)	MODERATE BENEFICIAL 9+8/2=8.5	a) INCREASE IN THE NUMBER OF FOREIGN TOURISTS/ LOCAL; b) INCREASE OVERNIGHT; c) INCREASE IN VISITS TO THE SITE; d) NUMBER OF NEW STORES; e) INCREASE JOB; f) INCREASE IN THE VALUE OF PROPERTY	a) NUMBER OF EMPLOYMENT FOR AN INDEFINITE PERIOD; b) EMPLOYMENT IN SOCIAL AND COMMUNITY c) NUMBER OF PEDESTRIANS WHO BENEFITS OF UPGRADING THE WATERFRONT; d) PERCEPTION OF PERSONAL SAFETY; e) CRIME RATE; f) No OF SERVICES TO APARTMENTS; g) REDUCTION OF POVERTY RATE	a) NUMBER PRODUCTION OF TYPICAL PRODUCTS; b) NUMBER OF VISITORS FOR TEMPORARY EVENTS; c) NUMBER OF VISITORS TO CULTURAL EVENTS; d) GROWTH OF CULTURAL EVENTS; e) NUMBER OF ARTISTS PREDNONNO PART TO CULTURAL EVENTS

Table 6 Economic Heritage Impact Assessment (Source: Author's elaboration)

The ultimate result of this research work is precisely to promote a new method of assessment, compliance with the recommendations of the UNESCO "Historic Urban Landscape" of 2011, which is able to identify instruments that ensure active conservation of the urban heritage, when they promote new development projects for the city.

Finally we can say that this tool considers and evaluates all aspects of tangible and intangible assets, which could be damaged by a large intervention. We tried in this paper, to deal with a special sensitivity, all the problems related to the heritage conservation and to the elaboration of new development projects, in a sustainable key, to solve today problems of our cities.

Through these new assessment tools we are able to:

- a. Recognizing and interpreting complex values and attributes of the assets;
- b. Identifying targets, alternative economic models and shared activities for sustainable development;
- c. Observing that the implementation of HUL in this perspective, and with new tools, enables us to assess the economic impact and consequently aim for the integrated conservation;
- d. Proposing integrated assessment tools that can be used in different phases (strategic level, operational level and the level of management plan);
- e. Defining the priorities for action;

The attention must be focused on determining the economic value of shareholders, through the use of quantitative and qualitative data, indicators and maps in compliance with the lines of the UNESCO Guide recommendations, through strategies that ensure the preservation of the heritage. Although the economic approach is necessary, it is not sufficient, however, to identify the limits to manage the change (Nijkamp, 2012).

This new tool can be considered very useful to assess the impacts of major projects of redevelopment of urban waterfronts, recognizing in the cities of the sea, great potential for economic growth. The means used have the ability to grasp the quality of study areas and also provide suggestions and hypotheses of actions to be taken to enhance the attractiveness of the waterfront and the entire city.

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