

THE REVITALISATION OF THERMAL AREAS IN THE BAGNOLI DISTRICT (NAPLES) AS A CHANCE FOR TOURISM DEVELOPMENT IN THE CAMPANIA REGION IN THE CONTEXT OF SELECTED EUROPEAN EXPERIENCES

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ABSTRACT: The article presents the project of revitalisation of the former industrial zone of the district of Bagnoli in the context of possibilities of development of the thermal tourism in the Italian region of Campania. The authors refer primarily to the thermal facilities which were in use in the period from the second half of the 18th century to the 1970s, and which border directly the area of revitalisation, but weren't included in the plan. The aims of the article are: (1) the reconstruction and the recommendation of the locations of the forgotten thermal sites formerly in use in the area of the Bagnoli district, (2) the presentation of the current state and development of such buildings, (3) the estimation of the tourism development potential in the region with reference to similar experiences of Poland and Austria, where the thermal infrastructures became the driving force of socio-economic development.

KEY WORDS: Bad Blumau, Bad Waltersdorf, Campania region, geothermal waters, socio-economic development, thermal site, Uniejów.

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Introduction

Revitalisation occurs in the literature as a widely used concept for it specifies all sorts of treatments, program upgrades and revalorisations of buildings or parts of the city, which is to stimulate socio-economic development (Sztaba 2013). The latter is seen particularly in the context of resolving social problems such as unemployment, crime or demographic imbalance. As noticed by Kaczmarek (2012), large areas of former urban industrial wasteland were a characteristic landscape of Western European cities. The relocation or closure of the industrial plants as well as their emergence are explained by the author

as a consequence of changes in technology, developments in transportation or the lack of their profitability. The existence of such land became an important 'cognitive' value of urban space, and had a huge effect on the degradation of the cityscape (Kaczmarek 2012: 11).

According to Kaczmarek (2012: 11), "since the 1960s, revitalisation has been seen as a method of renovation/re-organisation of the degraded parts of cities". For this reason "revitalisation refers to economic, social, cultural and spatial aspects and has a significant influence on the image of a city among its citizens and in addition affects the external image through promotional and marketing activity" (Kaczmarek 2001, 2010,

2012). The purpose of the revitalisation processes of urban space is to change the functional structure of the degraded area, which leads to an economic revival.

Revitalisation can be an opportunity for the comprehensive development of regions, in particular in relation to the former industrial districts where the restoration of economic spatial zones is particularly difficult. In the context of such considerations, it is important to present the project of revitalisation in a wider scale, where the action taken will constitute one of the elements supporting the development of the region, and will not be its leading objective. It is assumed to be so due to the fact that not every project of revitalisation has proved to be very effective, not always validating such implementation as a major socio-economic development.

When discussing revitalisation, it is also important to pay attention to its negative effects. Schiffer (2005) mentions them in the case of recovered obsolete industrial areas. The researcher notes that these are activities that require very high financial expenditures that do not guarantee success. Revitalisation can also contribute to the exponential growth of tourist traffic. In addition, the study conducted in Hong Kong (Chan et al. 2015) showed that the revitalisation of the brownfield areas there caused an increase in housing prices and rents of commercial premises, which significantly reduced the development of small and medium-sized companies which were forced to close down their business (Chan et al. 2015). The negative effects of the revitalisation process are also observed in the social area. The international literature indicates a particular focus on the phenomenon of gentrification understood as an increased investment and an influx of residents of higher socio-economic status into a lower-status neighbourhoods (Lin 2017). "Depending on the time and place, gentrification has been seen as a tool, goal, outcome, or unintended consequence of revitalisation processes in declining urban neighborhoods, which are defined by their physical deterioration, concentrations of poverty, and racial segregation of people of color" (Zuk et al. 2017: 2).

Lin (2017) underlines the example of the analysis of Philadelphia city that "past transformations and the current wave of gentrification stem from shifts in four fundamental factors:

amenities, productivity, access, and prices" (Lin 2017: 9). While in Berlin, an uneven geography of inner-city transformation has been observed as a result of a tremendous increase in rents that the German capital saw in the second half of the century (Reick 2017).

In view of the real risk of negative effects of revitalisation, the role of public investments is important. The public sector should pay special attention to it in order to stimulate and respond to renewed interest in urban living. As indicated by Zuk et al. (2017), these types of investments put government at risk of becoming an agent of gentrification and displacement. Moreover, the extent to which public investments catalyse residential displacement is not well-defined or quantified in social science research. The literature indicates that the public sector can play an important role in neighbourhood transformation through a number of avenues: investing in physical infrastructure, structuring land-use decisions, and incentivising business location, to name a few (Zuk et al. 2017). The public investment can shape the urban environment range from large-scale streetscape interventions, the impacts of land-use decisions (e.g. zoning) or other government interventions (e.g. tax relief). These observations are particularly relevant in the context of public sector involvement in the revitalisation process of the Bagnoli District.

For this reason, revitalisation should not be treated as isolated from the environment and at the same time it ought to be considered a key factor for economic stimulation. The project needs to be embedded in the realities of communities living in the area concerned. In order to do so, it is essential to indicate and specify what may be the potential for the development of the region, applying the latter as the main axis for further action. It is also significant that revitalisation ought to be targeted as an opportunity to preserve and highlight the identity of a given place with which a local community identifies and takes care of its image.

The presented test results include an analysis of the opportunities for socio-economic development of the regions based on the incidence of geothermal resources. Therefore the aims of the article are: (1) the reconstruction and the recommendation of the locations of the forgotten thermal sites formerly in use in the area of the

Bagnoli district, (2) the presentation of the current state and development of such buildings, (3) the estimation of the tourism development potential in the region with reference to similar experiences of Poland and Austria, where the thermal infrastructures became the driving force of socio-economic development. The article aims to present the untapped current natural potential which would be able to boost the social-economic development of such regions.

The main subject of the article is the district of Bagnoli, situated in the north-eastern side of the city of Naples (Italy), in which rich geothermal resources are present and that were formerly used for recreational purposes.

The background of the discussion is to assess the concept and feasibility of the revitalisation project of the area in which the factories Ilva/Italsider were closed in 1991, and which directly borders the land in which the former thermal sites are located.

The lost opportunities have been analysed in the context of the evaluation of the revitalisation project of the metallurgical complex of Ilva/Italsider in Bagnoli, which does not take into account the possibility of a new use of geothermal waters. The premise of the article is also a representation of the potential use of geothermal resources for boosting the socio-economic development of the region following the example of thermal complexes in Poland and Austria.

For this purpose, an assessment of the functioning of the sites in Uniejów (Poland), Bad Waltersdorf and Bad Blumau (Austria) has been conducted as well as their impact on regional development. Such towns serve as examples – good practices for areas where the existence of geothermal waters was previously used to stimulate the economic development of the region. The starting point of the research was to identify situations related to the use of geothermal waters in the Bagnoli district in the past, determine the location, the functioning of thermal facilities and the causes of their demise.

Research methodology

The research was conducted in five major stages: (1) an analysis of the literature and the documentation of the thermal sites, (2) an in-depth

interview, (3) a site inspection and the identification of the remaining thermal facilities in the area, (4) the preparation of a questionnaire, (5) a questionnaire survey, (6) comparative research.

Studies on the possibility of restoring the functions of the thermal objects in Bagnoli were initiated in connection with the revitalisation project of the closed steel area of Ilva/Italsider. The project states that the industrial wastelands bordering the district of Bagnoli are to be developed and oriented towards the promotion of tourism. Therefore, the potential of the thermal waters in Bagnoli and the existence of former bathing facilities on the location grounds could add value to the implementation of the revitalisation project of the brownfield area. The first phase of the study involves an analysis of the existing literature sources dealing with the development and the operation of the thermal facilities in Bagnoli. Attention was drawn to the time of the origin of the documents and their availability. In addition, in November 2018, an analysis of the private documentation from the archive of the descendant of the Masullo family (the former owners of the thermal site) was carried out – Gennaro Masullo, consisting in collecting sources such as postcards and photographs of ownership documents of the thermal sites. The preliminary research and the analysis of source materials were accompanied by an in-depth interview with the owner of the archives G. Masullo, who, as a person directly knowing the history of the thermal facilities, shared many valuable messages about the past and current state of such facilities (Masullo 2018).

On the basis of the acquired information and the preliminary archival research an inventory was made in order to identify the remaining thermal facilities in the area, their current purpose and status quo. An important element was a direct observation in the field and the inventory of the area combined with the photographic documentation showing the current status of the thermal facilities in Bagnoli.

The fourth stage of the study consisted in formulating a survey questionnaire addressed to the residents about the existence of thermal waters in the Bagnoli district. The information gathered from the mentioned in-depth interview proved to be helpful. The questions were open and supervised. The structured interviews conducted among the local community in March 2018

complemented the research. The discussions focused on the knowledge of respondents about geothermal waters in Bagnoli and the history of the development of the metallurgical conglomerate plant Ilva/Italsider.

The results include interviews with forty inhabitants of Naples and 15 surveys completed by the inhabitants of the Bagnoli district. The last research methods used in the work is a comparative study based on the presentation of selected European towns (Uniejów, Poland, Bad Waltersdorf and Bad Blumau, Austria) with geothermal water resources. They have been used for more than a dozen (Uniejów) or dozens of years (Austria) with success for regional development. Geothermal potential is a common feature of all the villages analysed in the study. What differentiates these areas are the location of thermal facilities (Bagnoli – in the brownfield area of the large city; Uniejów, Bad Waltersdorf and Bad Blumau – in the vicinity of small towns in agricultural municipalities), the history and the determinants of their creation and the functions (the bathing facilities in Bagnoli have a much longer tradition, and the baths in Poland or Austria are typical and fairly young objects functioning as recreational 'Aquaparks' in places considered health resorts). The comparative study method consists in analysing the common characteristics and differences of the subjects and phenomena examined, provided that they are comparable. Despite the above-mentioned differences characterised by the thermal objects listed above, the comparability requirement is fulfilled. In this case, the main objective of the comparative study is to make use of the potential of geothermal waters, the involvement of the inhabitants and the efficiency of the authorities' activities (local, regional and national) in all the localities, which are more accurately described in the next sections of the article. The following towns have been compared: Uniejów, Bad Waltersdorf and Bad Blumau. The article also shows examples of good practices associated with the effective use of geothermal waters benefitting the socio-economic development of the entire regions. Therefore, the introduction of the case studies of Poland and Austria, which carry a positive experience in this respect, constitutes the basis for the inferences and evaluations on the possibilities of improvement of the area of Bagnoli.

The use of geothermal waters for recreational purposes in the Bagnoli district – history and current status

The Bay of Pozzuoli, above which the north-western part of Naples is situated, is a fragment of the volcanic areas of Phlegraean Fields, which explains the existence of geothermal waters. The use of these waters for medical purposes is evidenced by the documents from the end of the 15th and the beginning of the 16th centuries, when many existing geothermal objects were destroyed by a strong earthquake (29/30.09.1538) (Bartoli 1679). A few years later, Viceroy Don Pedro of Toledo decided to restore the functioning of the most famous sources of geothermal waters, but after carrying out technical checks, the costs of the project implementation were too high and therefore the idea was abandoned. A hundred years later (in 1666) Governor Don Pedro from Aragona again assessed the benefits of the reconstruction of thermal facilities deciding to initiate work in this regard.

He hired a team of experts led by the physician Sebastiano Bartolo Iripino. Based on the existing documentation, he carried out some field studies and identified over 40 sources of geothermal waters in the Phlegraean Fields. The information about the completed research was included in the work *Thermologia Aragona* (1679), which was divided into three parts, their remains being three marble plates called *Epitaffi* (Bartoli 1679). Only two of them survived to the present time. The richness of the geothermal Phlegraean Fields was used at the end of the 19th century to build eleven facilities (according to the available sources of information), and some of them, apart from thermal baths, were accompanied by luxurious and wide-extending parks and gardens. Their existence is documented in the Historical Archives in Naples (mainly journal articles) and photos, postcards and archival documents collected by a descendant of the family who is in possession of one of the thermal facilities – Gennaro Masullo (Masullo 2018). The development of geothermal infrastructures took place not only in Bagnoli, but also in nearby Agnano, where from 1870 geothermal waters started to be used again for medical purposes. The tradition of balneotherapy in Agnano dates back to the domination of the Romans, but due to natural

Table 1. Basic information about the thermal facilities in the districts of Bagnoli and La Pietra.

L.p.	Name of a thermal facility	Period of functioning	Location	Subsequent use of the building after the closure of the thermal facility and current state of development and functions
1	Serse Rocco	around 1850 -1950s.	at the intersection of Lavigna street and Nuova Bagnoli street, across the street from the thermal facility Manganella	facility still exists (ownership of the Pisa family), slightly modified, holds a residential function, geothermal waters were cemented
2	Gaetano Manganella	1831-1960s	along Nuova Bagnoli street, from the intersection, coming out of Lavigna street to Bagnoli Square	resignation of the Manna family from geothermal activity, devastation of the building, construction of an eight-storey residential unit
3	Domenico Tricarico	1882-1977/78	Bagnoli Square, from the beach side	facility restored several times, it provided shelter for the population after the earthquake in 1980, then it was sold to the group Corsicato De Santis, it was later established as a hotel school functioning until 2017, currently abandoned property
4	La Sirena	end of 19th c.-end of 1950s	Bagnoli Square, next to the thermal facility Tricarico	facility still exists, is partly degraded and in parts is inhabited by the descendants of Salvatore Masullo
5	La Ravaschieri	end of 19th c.-1970s	Pozzuoli street no. 5, near Bagnoli Square	facility was demolished, the Marine institute in Naples was built in its place, today National Technical Nautical Institute <i>Duca degli Abruzzi</i>
6	Gennaro Masullo (afterwards Cotroneo)	1834-end of 1950s	from Bagnoli Square in the direction of Pozzuoli after the intersection with Messina avenue	in 1922 the complex was sold to the family Cotroneo, and after its closing the facility was partly demolished. A 6-storey residential building was constructed in its place. The remains of the thermal facilities are scarce, the building is abandoned and to this day it is accompanied by Bathhouse <i>Lido Fortuna</i>
7	Di Leo	beginning of 20th c.-end of 1950s	along Nuova Napoli street, at the height of La Pietra	villa with panoramic terrace, renewed, currently serves as residential area (family Avallone)
8	Vitolo Calatura	end of 19th c.-end of 1950s	La Pietra, next to the thermal facility Di Leo, before the administrative border Pozzuoli	building renovated several times, currently serves as residential area
9	Aurora Patamia	1865-1950s	along La Pietra street	building was sold after the death of A. Patamia, currently serves as residential area
10	La Pietra - Pipera	1850-end of 1950s	along Nuova Napoli street, at the height of La Pietra	facility is partially preserved, with a pool built for athletes
11	Lettieri	no data	along La Pietra, the accurate location is missing	lack of information due to inaccurate location

Source: own elaboration based on the data from the private archive of G. Masullo.

disasters (flooding area) this activity was interrupted in the 11th century and resumed at the end of the 19th century. Agnano turned out to be very rich in the resources of geothermal waters of different temperatures (from 19°C to 105°C), which made this place an extremely popular one, attracting a large number of patients. In Bagnoli, in the immediate vicinity of the sea, new thermal complexes sprang as well. Over time, however, the geothermal complexes in Bagnoli lost importance. After the second world war they were gradually closed in consequence of pollutants coming from the steel mill Ilva/Italsider operating at the time. It was observed that as a result of the significant degradation of both the landscape and natural resources brought by the expansion of Ilva/Italsider industries, the geothermal complexes in Bagnoli lost importance. Another cause was also the competition from the vibrant development of thermal facilities in Agnano. The existence of the Bagnoli geothermal complexes is testified by the mentioned documentation and the remaining facilities in the public space, which due to reconstructions and functional changes is often hard to identify in the field. Currently, geothermal complexes serve other purposes and are, in many cases, degraded so much that they require an appropriate revitalisation. It should be stressed that all thermal structures were created as private investments. Now, due to the difficulties in obtaining adequate permits to revive thermal activities, the potential of thermal waters cannot be fully exploited. The detailed information on the facilities are listed in Table 1.

The impact of the iron and steel industry in the district of Bagnoli on the state and management of the area in the context of the functioning of thermal facilities

The choice of the location of the industrial enterprise in the Bay of Pozzuoli was associated with the realisation of the development plan for the South (It. *Piano di Sviluppo per il Mezzogiorno*) implemented at the beginning of the 20th century. The first sites of the Ilva/Italsider metallurgical plants began to operate in 1910. Both the war and the economic crises affected the size and pace of steel production in the smelter. It was shut down several times, which led to protests and the restoring of the production. Increased

demand for steel was reported after the second world war, therefore, the Bagnoli plants were expanded, which led to an increase in production (Repubblica 1984). However, significant environmental problems started to appear – water and soil pollution that had consequently an obvious negative impact on human health. Nevertheless, at that time public wasn't aware of this fact. The metallurgical complex that bordered the geothermal facilities from the north-west directly, destructively influenced the functioning and the possibilities of the further development of these facilities (Noviello 2018 a, b). As a result, they were all closed down which led to an almost total decline in the development of coastal tourism. The Ilva/Italsider plants were finally closed in 1991 and the entire area was meant to be used for other, at that time still unspecified purposes. From that moment, many propositions appeared aiming to develop the area of the former metallurgical plants, but for political and economic reasons (removing the effects of environmental pollutants proved to be very expensive: rehabilitation of soil and water purification) only single service facilities were completed: Città della Scienza, the Turtle Point, Porta del Parco (the Park Gate).

The first of these objects operates under the care of Fondazione Idis-Città della Scienza and its activities aim at building a new economy based on knowledge in order to create a greater social cohesion. Fondazione Idis supports its local stakeholders (school networks, companies, enterprises, local bodies and associations) which became partners by contributing to testing new cultural products and spreading their effects through local actions. Moreover, Fondazione Idis plays its role in European and Euro-Mediterranean contexts, thanks to both its knowledge of the real condition of contemporary scientific and technological research and the strategic position of Naples and Southern Italy (Città della Scienza 2019). The Turtle Point in Bagnoli, formed in 2004, is a subsidiary of the Zoological Station Anton Dohrn, situated in Naples. The centre is concerned with the biology and evolution of marine organisms, in particular sea turtles. It is a very important place of research on the life of marine organisms (Stazione Zoologica 2019). Porta del Parco is an ultra-modern multifunctional leisure complex, dedicated to conferences, business meetings and

events. Despite the fact that all these objects are of great interest, they do not constitute an integrated touristic-educational-business offer.

It was not until 2017 that the revitalisation project of the former Ilva/Italsider plants was signed involving the construction of a large sea-side complex, while at the same time preserving and valorising the buildings that were once part of the steel mill. The project involved the division of the investment area into nine thematic zones (1 - park and beach; 2 - fishing village, lodging and commercial facilities; 3 - housing, university campus, 4 - research and scientific activities, 5 - a shopping centre, new Cumana station, 6 - services and production, 7 - existing residential sites, 8 - educational sites, 9 - a sport park) (Noviello 2018a; Comune di Napoli 2017). The border of the project goes along Nuova Bagnoli street, where in its opposite side, in an area which is today a residential quarter, up to the '70s luxurious geothermal complexes were in use (Fig. 1).

The revitalisation of the brownfield part of the Bagnoli district was supposed to start more than 25 years ago. The state transferred funds several times for this task. The individual interventions carried out included the rehabilitation of soil and water purification, but were not fully

implemented due to the bankruptcy of the companies in charge (Bagnoli spa, Bagnolifutura). For this reason, many times (lately in 2013, 2014, 2018) the area was subjected to seizure due to the declared environmental disaster (Il Fatto... 2013; Crimaldi 2014; Di Costanzo 2018). As a result of the litigation, the area was completely excluded from any investment. In July 2019, it was again released from seizure and handed over to Invitalia spa, which is tasked with cleaning up the entire Bagnoli area (in less than a year). The Minister for Southern Italy and Territorial Cohesion declares that this step is extremely important for the relaunch of Bagnoli and the entire region (Minister... 2019).

The revitalisation project of the former site of the Ilva/Italsider mill in the light of the possible use of the geothermal potential of Bagnoli and regional tourism development

Based on the field studies aimed at, e.g. the identification of the location of the former thermal facilities and their current state of development and based on the available archival documentation, their current functions as well as the position directly at the border of the revitalisation project of the former Ilva /Italsider plants,

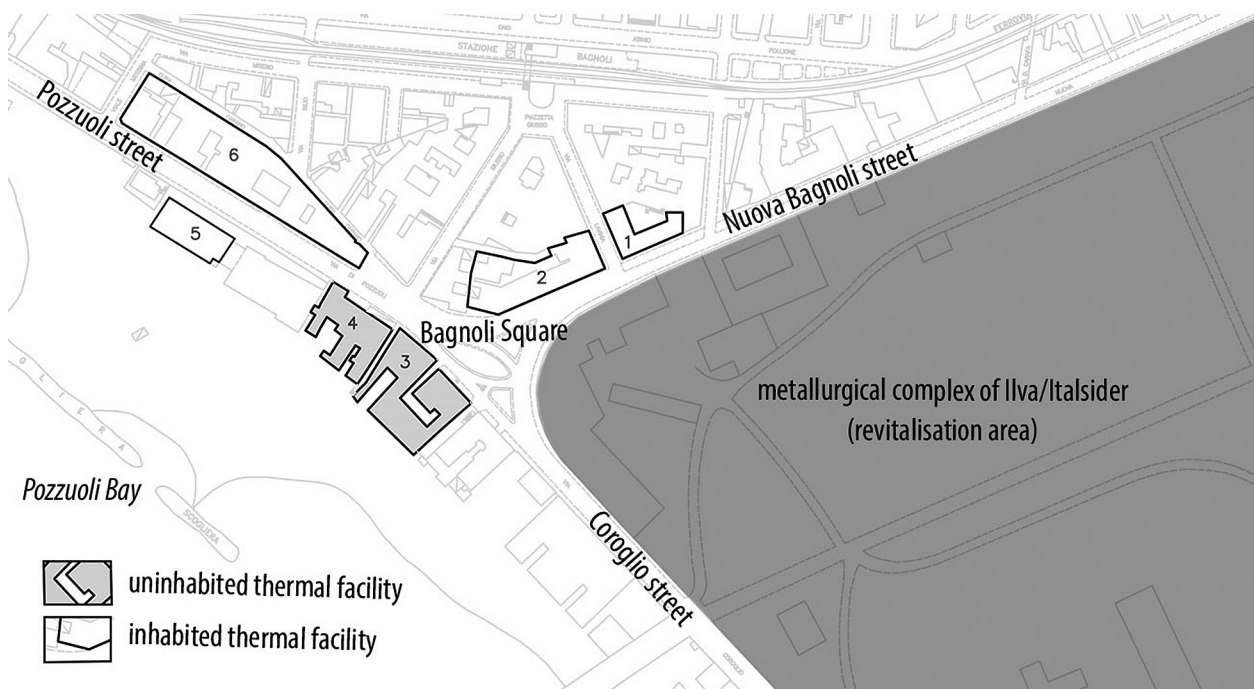


Fig. 1. Location map of selected non-functional thermal facilities in the Bagnoli district.
Source: own elaboration based on the data from the private archive of G. Masullo.

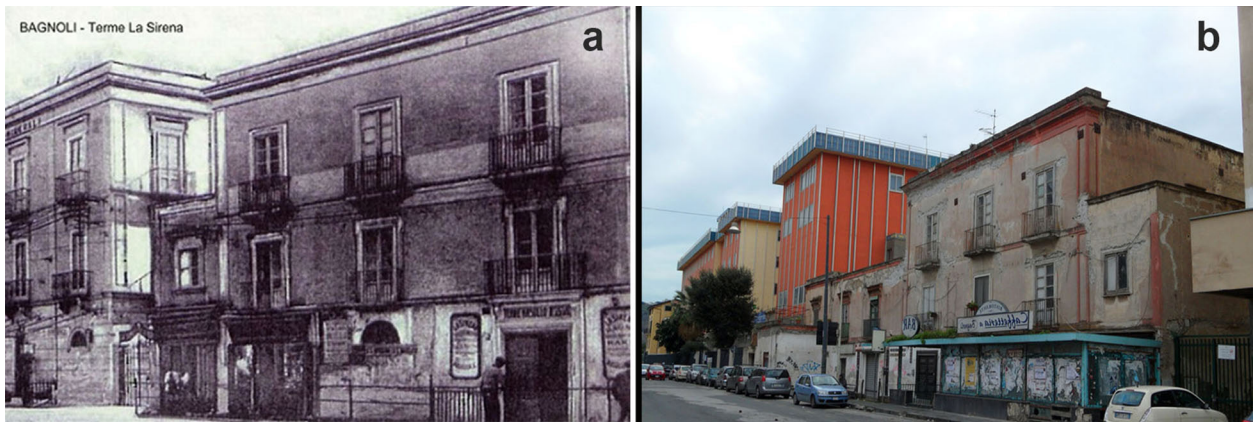


Fig. 2. The Sirena thermal facility in around 1940 (a) and in 2018 (b).
Source: G. Masullo – private archive (a); photographed by M. Noviello (b).

the revitalisation process of the former Bagnoli industrial areas could be discussed. The potential revitalisation might involve even those facilities that do not currently have a specific purpose and are subject to gradual degradation (baths of Tricarico and La Sirena – Fig. 2). Despite the fact that the project of revitalisation is very strongly oriented towards the development of tourism in the region, unfortunately it does not include the usage of the nearby geothermal waters. What could be suggested is the renovation and restoration of the old premises of thermal facilities, which may contribute to the development of services in balneotherapy (hydrotherapy) or recreational services in the field of wellness and spa. The mentioned business directions certainly would boost economic development because nowadays the demand for this type of service is significant and constantly growing (Csirmaza, Pető 2015). The housing estate of the Bagnoli district should be taken into account in the revitalisation process. It borders the former industrial field and could contribute to the improvement of the socio-economic situation (for example, an improvement in the living conditions of the residents, the development of public spaces, the situation on the labour market) and enhance the attractiveness of the area, and even the entire region of Campania.

In relation to the possibility of improving the living conditions in Bagnoli, Antonio di Dio (chairman of the Civic Committee of Bagnoli) expressed concern about the rising prices of houses in the area during the meeting (29 April 2016) on the detailed arrangements for revitalising the area under consideration:

“There have been divisions in Coroglio, there is a Committee, that of the residents, in favour of the eviction and that therefore would like to raze the village of Coroglio as they hope to have public housing in the former Italsider area, and then there is the Committee of Landlords of the houses of Coroglio who want to stay here and who want the upgrade and redevelopment of the village. We have taken a strong and unambiguous position: the village of Coroglio must remain and be requalified and we hope to grant as soon as possible to the citizens of Coroglio the peace that they deserve. But should also pay attention to the residents as they too must be protected from a disproportionate increase in rents. This is the fear of the residents, a fear that at the moment is without foundation (Antonio Di Dio, chairman of the Civic Committee of Bagnoli; <http://www.comitatobagnolipuntoeacapo.it>)¹.”

The reason for an unexploited opportunity for growth of this district is not only the failure to

¹ “Si sono creati delle divisioni a Coroglio, c’è un Comitato, quello degli inquilini, a favore dello sgombero e che quindi vorrebbe radere al suolo il Borgo di Coroglio in quanto sperano di avere alloggi popolari nell’ex area Italsider, e poi c’è il Comitato dei Proprietari delle case di Coroglio che vogliono rimanere qui e che vogliono il potenziamento e la riqualificazione del borgo. Noi abbiamo preso una posizione decisa e non ambigua: il borgo di Coroglio deve restare e riqualificato e speriamo di dare al più presto ai cittadini di Coroglio serenità che meritano. Ma ci deve essere anche attenzione nei confronti degli inquilini in quanto anche loro vanno tutelati da un eventuale aumento spropositato dei fitti. Questa è la paura degli inquilini, paura che al momento è però priva di fondamento” (Antonio Di Dio, chairman of the Civic Committee of Bagnoli; <http://www.comitatobagnolipuntoeacapo.it>)

incorporate it into the revitalisation project of the former steelworks, but also problems with the owners of thermal objects obtaining appropriate start-up permits. For this reason (as shown in the results of interviews among the local community), the inhabitants argue that there are little real opportunities to restore the thermal function in the Bagnoli district. They admit, however, that the possibility of developing the thermal waters would contribute to the development of the whole region, which is faced with ever-increasing unemployment. Such statements were declared by entrepreneurs living in Bagnoli:

“Our neighbourhood (Bagnoli) is a resource not only for Naples or Campania, but for the whole of Italy. We hardly find another place where we have the opportunity to develop tourist activities next to the sea, in a historical-geographical-archaeological landscape in the vicinity of Cuma and the Phlegraean Fields. Thanks to the proper management of thermal waters, we could solve many socio-economic problems such as the increasing unemployment or emigration” (interview of 20 March 2018, the Bagnoli District).

Only a few respondents heard about the possibility of the use of geothermal waters in Bagnoli, and the vast majority did not even know that thermal facilities exist in this area (These were mostly young people who do not live permanently in the surveyed district):

“Are there thermal waters in Bagnoli? I know for sure there are in Agnano, but I haven’t been there yet. In Bagnoli there is a lot of degradation and there has always been talk of the redevelopment of the area, but the results are neither seen nor felt” (interview of 18 March 2018, Fuorigrotta District).

Due to the problems related to soil reclamation for the inhabitants of this district, a key problem to solve turns out to be the development of the former steel mill area. The inhabitants seek opportunities for socio-economic development and improvement of their situation on the labour market, ignoring completely the local potential related to the old traditions of spa and recreation based on the resources of geothermal waters. They focus on the revitalisation of the former

industrial areas. However, it is not possible to introduce effective changes without support, commitment and social initiatives (both bottom-up and taken by the authorities), at the heart of which the appropriate substantive knowledge should be present, awareness of the values of the area and the possibility of their use as well as the desire to take action.

The implementation of the revitalisation project of the Bagnoli district requires considerable capital outlays. For this reason, it has taken on a national dimension. The Campania region is poorly developed and struggles with socio-economic problems and is not able to cover the costs of implementing such a project. Its priority is to combat the growing unemployment (especially among young people), which contributes to the growth of emigration to other richer regions. The amount of average annual income differs, which becomes an additional reason for departures (in the year 2017 the highest income was in the region of Lombardy: 31.718 euros, the lowest in Calabria: 24.453 euros, while in the Campania region: 26.790 euros) (Istat 2019).

Transformation of places related to thermal tourism development on the example of Uniejów (Poland), Bad Waltersdorf and Bad Blumau (Austria). The importance of thermal tourism for regional development

As shown by the examples of the history of the selected thermal localities: Uniejów (Łódź Voivodeship, Poland), Bad Waltersdorf and Bad Blumau (the state of Styria, Austria), in which thermal infrastructure has become a driving force for their development in the socio-economic and functional-spatial spheres, not just the existence of natural resources (i.e. geothermal waters), but also the appropriate public awareness with regard to their use contributed to long-lasting transformation and sustainable development of such regions. A key factor affecting an adequate use of the local economic resources and the potential of the analysed areas is also the local policy conducted by the municipalities. It should be thoughtful and consistent, based on the initiative of the representatives of power: an innovative, strategic and long-term development plan (Smętkiewicz 2014; Kulawiak 2015; Kulawiak, Smętkiewicz 2016). A common feature of the

mentioned three localities is the dynamic and even spectacular socio-economic development as a result of the use of geothermal waters for balneotherapeutic, recreational and energetic purposes. In all cases it was an original impulse that triggered a series of positive changes, through which these municipalities changed their nature: from the functional-spatial, economic and demographic point of view, starting from a situation of stagnation, collapse and lack of prospects of development. The decisions, as history shows, the reasonable direction of development of the locality were taken by a group of people with a high degree of awareness of the potential that ought to be discovered and used. Such people had a visionary and prospective view of the future, based on sustainable development and effectively used the possibilities of financial and substantive support as well as the chances of cooperation based on the exchange of knowledge and experience. The recipe for success presented above has proved to be fruitful both in the example of Spas in the Spa Country Styria (De. *Steirisches Thermenland*): Bad Waltersdorf (thermal complex opened in 1984, health-resort status from 1988), Bad Blumau (thermal complex in use from 1997, health-resort status from 2001), or so far the youngest Polish health-resort Uniejów Thermal Spa (the first thermal facility was established in 2008, it was expanded in 2012, and the opening of the next phase is scheduled for 2019, holding a health-resort status from 2012 onwards) (Kaczmarek, Smętkiewicz 2013; Smętkiewicz 2014; Kulawiak, Smętkiewicz 2016; Kulawiak et al. 2018). Based on the analysis of the examples above, the development of the thermal localities can bring many effects locally, regionally, nationally and internationally. Such effects can be grouped into the following changes (Gorczycewska, Smętkiewicz 2013a, b; Kaczmarek, Smętkiewicz 2013; Smętkiewicz 2014; Kulawiak et al. 2018):

- social:

- improvement in the quality and the living conditions of the inhabitants,
- social activation of residents, integration, bottom-up initiatives, social participation,
- an increase in entrepreneurship and the employment of residents,
- a decrease in the migration balance,
- an influx of new residents,

- an increase in the sense of belonging of the inhabitants with their small homeland, the sense of local pride,
- greater opening to the world community in relation to the influx of tourists.
- economic:
- improvement in the situation on the labour market through the creation of new jobs, new employment opportunities for young people,
- reduction of unemployment,
- a decline in the emigration of the working-age population,
- an influx of new external investors,
- attraction of skilled labour,
- an increase in tourism (an increase in the number of visitors and tourists, hence an increase in the number of granted accommodations),
- more municipal, residential, touristic and spa investments,
- development and improvement of the tourist infrastructure,
- a wider variety of offers and improvement in the quality of trade and services, greater attention to the quality of services,
- improvement in the quality of agricultural production (increasing value of organic farming),
- local and regional market development and an increase in the importance of local food and culinary traditions in the promotion of the region,
- further possibilities of using geothermal waters (e.g. for the production of cosmetics, groceries),
- improvement in the image and attractiveness for tourists and investors, intensification of the activities in the promotion and marketing of places.
- functional-spatial:
- change in the nature of the locality into a touristic and health resort location,
- spatial transformation of the locality, e.g. through the management of wastelands, providing new functions in areas previously unexploited,
- revitalising activities in the locality and municipality,
- actions aimed at improving and maintaining the appropriate aesthetic values of the locality and care for the good state of the environment and spatial order.

All the above-mentioned changes which are the basis for the development of thermal tourism, have still taken place in the locations analysed and has been widely described in the cited literature (Gorczycewska, Smętkiewicz 2013a, b; Kaczmarek, Smętkiewicz 2013; Smętkiewicz 2014; Kulawiak et al. 2018). Taking into account the constantly growing perspectives of thermal tourism market both in Poland and in many European countries as well as in the world, it must be stated that this form of tourism and recreation (travel to health resorts and thermal centres) shows significant potential and a great chance of dynamic growth. It is worth noting that the stimulants of the development of thermal tourism are, among others, appropriate geothermal resources, the traditions and the history of the use of geothermal waters for balneal-therapeutic and recreational purposes, clear cultural trends in modern society associated with attention to health and prevention, and an increasing popularity of such ways of spending time. The key to an effective development of thermal tourism, however, is the steady development of both sides of the market, demand and supply. The interest in this form of tourism alone on the part of the public will not be sufficient and will not guarantee success in the cases of: inadequate base of thermal facilities, unrealistic requirements and needs of the social infrastructure as well as offers and quality services related to thermal tourism (Dryglas, Hadzik 2016).

In the light of this type of predictions, along with the presented trends in and factors of thermal tourism development, it is possible to clearly state that the district of Bagnoli in Naples has a significant socio-economic development potential, based on the reuse of geothermal waters, the exploitation of which depends on the ability to adopt the good practices of Poland and Austria presented in the article.

Conclusions

In 2017, the project concerning the revitalisation of the former Ilva plant industrial area in Bagnoli was signed. Despite the fact that this is an investment focused on the development of regional tourism, the possibility of the usage of geothermal waters, constituting the natural wealth

of Bagnoli, has not been included. Such wealth, if included in the discussed project along with an action for a revitalisation of the present building of the former thermal facilities, would certainly restore old touristic traditions and would allow a full use of this area potential. It could certainly cause a large number of positive changes as it happened in the cases of the thermal locations in Poland and Austria. Among the most important the following should be listed: the enrichment of the tourist offer, an increase in the attractiveness of the region, the influx of new investments, a decrease of unemployment and improvement in the local labour market, and a variety of other positive socio-economic effects for the entire region.

For more than 25 years, the plans for the revitalisation of the Bagnoli District have been encountering many obstacles that prevent meeting the basic demands of the project. Despite the fact that the Italian Government has repeatedly spent funds for soil rehabilitation, no effective measures to implement it have been taken (300 million to 2016). Local authorities are requesting that Bagnoli becomes a symbol of the region's tourism in the coming years. A major obstacle proved to be an indictment directed against public administrators accused of crimes including environmental disaster and fraud against the State. Due to legal proceedings, it is not possible to continue the work related to soil rehabilitation, and this blocks the implementation of the successive stages of the project. Pointing to the negative effects of the development of the thermal waters in Bagnoli, it was concluded that the implementation of this task could lead to a slowdown or inhibition of thermal tourism in nearby Agnano. In addition, the inhabitants of Bagnoli would be exposed to the negative effects of gentrification (an increase in housing prices, excessive tourist traffic) and significant as well as negative changes in the landscape. Despite the risk of negative effects, it was stated that the project's benefits would have the potential to develop tourism throughout the region. This is why a comparative study was carried out to identify the natural potential of the towns in Poland and Austria. It presented the examples of 'good practices' for the involvement of residents and the effectiveness of actions carried out by the authorities (local, regional and national). This can be an inspiration and an example for the authorities of towns/regions such as Naples

in the context of the use of the existing potential to make the socio-economic development of the area more dynamic. The article presents many reasons (in addition to the thermal water resources) for the efficient socio-economic development of the examined towns, such as: high social awareness regarding the use of the geothermal potential, far-sighted views, the implementation of sustainable development principles and local policies based on long-term plans, innovations, actions activating local and regional communities, improving entrepreneurship, acquiring investors and external resources. As a result, local and regional authorities have contributed to significant economic growth, positive functional and spatial changes and the improvement in the social situation of these towns and regions.

The examples of thermal locations: Uniejów, Bad Waltersdorf and Bad Blumau confirm that the appropriate state of social awareness contributes to the rational and comprehensive use of the local potential and resources (among others, geothermal), and hence the development of thermal infrastructures and thermal tourism. As a consequence, a sustainable development of cities and regions is possible and it leads to: positive socio-economic changes of localities and regions as well as the improvement of the environment. The list of potential benefits of thermal facilities, cited in the article, stems from the experience of selected towns in Poland and Austria and constitute good examples – an inspiration for other areas, as well as the vision of a potential future for the Bagnoli area if the bathing facilities were included in the revitalisation plan of the District.

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Author's contribution

The authors divide the contribution as follows: Monika Noviello – 50%, Karolina Smętkiewicz – 50%.

References

- Bartoli S., 1679. *Thermologia Aragonia: sive, Historia naturalis thermarvm in occidentali Campania ora inter Pau. Ex Typographia Nouelli de Bonis, Napoli, Italia.* Online: <https://archive.org/details/thermologiaarag00bartgoog/page/n3> (accessed: 10 March 2018).
- Csirmay E., Petó K., 2015. International trends in recreational and wellness tourism. *Procedia Economics and Finance* 32: 755–762. Online: <https://www.sciencedirect.com/> (accessed: 4 September 2019).
- Chan A., Cheung E., Wong I., 2015. Impacts of the revitalizing industrial buildings (RIB) scheme in Hong Kong. *Sustainable Cities and Society* 19: 184–190.
- Città della Scienza, 2019. Fondazione Idis-Città della Scienza. Online: <http://www.cittadellascienza.it> (accessed: 7 September 2019).
- Comitato Bagnoli Punto e a Capo, 2019. Coroglio non si tocca – Raffaele Del Giudice, Antonio Di Dio e Paola Minieri dicono no agli espropri. Online: <http://www.comitato-bagnolipuntoeacapo.it/index.asp?id=163> (accessed: 10 October 2019).
- Comune di Napoli, 2017. Accordo Inter istituzionale Governo Italiano, Regione Campania, Comune di Napoli. Programma di Risanamento Ambientale e Rigenerazione Urbana Area di Rilevante Interesse Nazionale Bagnoli – Coroglio. Online: <https://www.invitalia.it/-/media/invitalia/documenti/rianciamo-le-aree-di-crisi-industriale/bagnoli/10-accordo-interistituzionale-del-19-luglio-2017.pdf?la=it-it&hash=987749A480B635EA749F5B8C1A35BC9A83C44580> (accessed: 20 September 2017).
- Di Costanzo A., 2018. Bagnoli, sei condanne dai 4 ai due anni. E il Tribunale dispone la revoca del sequestro delle aree. *Repubblica-Napoli*. Online: https://napoli.repubblica.it/cronaca/2018/02/05/news/bagnoli_condanne-188079970/ (accessed: 10 October 2019).
- Dryglas D., Hadzik A., 2016. Rozwój rynku turystyki termalnej w Polsce (Development of the thermal tourism market in Poland). *Geoturystyka* 3–4: 46–47.
- Gorczycewska E., Smętkiewicz K., 2013a. Budowa i promocja marki miejsca na przykładzie uzdrowiska termalnego Uniejów (Formation and promotion of the brand space on the basis of the Thermal Spa Uniejów), *Studia Ekonomiczne. Zeszyty Naukowe Wydziałowe Uniwersytetu Ekonomicznego w Katowicach* 144(13): 396–408.
- Gorczycewska E., Smętkiewicz K., 2013b. The use of territorial marketing in the development of the municipality – case study of the thermal Spa Resort in Uniejów. *Inter-cathedra* 29(4): 50–56.
- Crimaldi G., 2014. Bagnoli, mancata bonifica. Nuovo sequestro per l'area ex Italsider. *Il Mattino*, Online: https://www.ilmattino.it/napoli/cronaca/bagnoli_bonifica_sequestro-730004.html (accessed: 5 September 2019).
- Il Fatto Quotidiano, 2013. Napoli, sequestrata l'area di Bagnoli: "Disastro ambientale e truffa". Online: <https://www.ilfattoquotidiano.it/2013/04/11/napoli-sequestrata-larea-di-bagnoli-diasastro-ambientale/558824/> (accessed: 2 September 2019).
- Istat, 2018. Conti economici territoriali. Online: https://www.istat.it/it/files/2018/12/Report_Conti-regionali_2017.pdf (accessed: 15 October 2019).
- Itagaki Y., 1963. Criticism of Rostow's Stage approach: The concepts of stage system and type. Online: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1746-1049.1963.tb01138.x> (accessed: 30 September 2019).

- Kaczmarek J., 2010. Zarządzanie wizerunkiem miasta – uwagi heurystyczne (Image management of the city – heuristic remarks). In: Słodczyk J., Szafranek E. (eds), *Studia Miejskie 1. Koncepcje i instrumenty zarządzania procesami rozwoju i rewitalizacji miast* (Concepts and instruments for managing urban development and regeneration processes), Uniwersytet Opolski, Opole: 29–38.
- Kaczmarek J., 2012. The influence of the revitalization of former industrial urban areas on new urban and tourism spaces: Case study of Manchester and Lyon. *Tourism* 22(1): 11–20. DOI 10.2478/v10106-012-0002-3.
- Kaczmarek J., Smętkiewicz K., 2013. Potencjał wykorzystania wód geotermalnych na przykładzie Uzdrowiska Uniejów (Potential use of geothermal water on the example of Uniejów health-resort). *Ciepłne Maszyny Przepływowe Turbomachinery* 143: 73–83.
- Kaczmarek S., 2001. *Rewitalizacja obszarów poprzemysłowych. Nowy wymiar w rozwoju miast* (Post-industrial regeneration. A new dimension in urban development), Wydawnictwo Uniwersytetu Łódzkiego, Łódź.
- Kulawiak A., 2015. Wykorzystanie funduszy strukturalnych w Uniejowie w latach 2004–2013 (The use of EU structural funds in Uniejów (2004–2013)). *Biuletyn Uniejowski* 4: 157–166.
- Kulawiak A., Smętkiewicz K., 2016. Polityka lokalna gminy Uniejów – wybrane aspekty teoretyczne i praktyczne. (Local policy of the municipality of Uniejów – selected theoretical and practical aspects), *Acta Universitatis Lodzensis. Folia Geographica Socio-Oeconomica* 24: 87–104. DOI 10.18778/1508-1117.24.07
- Kulawiak A., Smętkiewicz K., Rachwał T., 2018. Wpływ inwestycji infrastrukturalnych, przemysłowych i budownictwa mieszkaniowego na rozwój układów lokalnych i regionalnych na przykładzie gminy Uniejów w województwie łódzkim (The impact of infrastructure, industrial and housing investments on the development of local systems based on the example of the Uniejów commune in the Łódź Voivodeship (Poland)). *Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego* 32(3): 69–97. DOI 10.24917/20801653.323.5.
- Lin J., 2017. Understanding gentrification's causes. *Economic Insights* 2(3): 9–17.
- Masullo G., 2018. Private archive (not published).
- Ministro per il Sud e la Coesione, 2019. Bagnoli, finalmente il dissequestro delle aree. Online: <http://www.ministrop-erilsud.gov.it/it/comunicazione/notizie/dissequestro-bagnoli/> (accessed: 10 October 2019).
- Noviello M., 2018a. Projekt rewitalizacji dzielnicy Bagnoli jako czynnik wzrostu gospodarczego Neapolu (Revitalisation of the Bagnoli district as a factor of economic growth in Naples). *Przedsiębiorczość – Edukacja* 14: 137–149. DOI 10.24917/20833296.14.10
- Noviello M., 2018b. Rola hutnictwa w rozwoju regionalnym Kampanii (Włochy) w XX wieku (The Role of metallurgy in the regional development of Campania (Italy) in the 20th century). *Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego* 32(3): 186–200. DOI 10.24917/20801653.323.12.
- Reick F., 2017. Gentrification 1.0: Urban transformations in late-19th-century Berlin. *Urban Studies* 55(11): 2542–2558.
- Repubblica 1984. L'Italsider di Bagnoli può raddoppiare la sua produzione. *La Repubblica* 10(12). Online: <http://ricerca.repubblica.it/repubblica/archivio/repubblica/1984/10/12/italsider-di-bagnoli-puo-raddoppiare-la.html> (accessed: 5 March 2018).
- Schiffer S.T.R., 2005. Revitalizing obsolete inner industrial areas as an alternative to peripheral urban growth. *City & Time* 1(3): 4. Online: <http://www.ct.ceci-br.org>. (accessed: 5 September 2019).
- Smętkiewicz K., 2014. *Świadomość społeczna wykorzystania wód geotermalnych w województwie łódzkim i landzie Styria w kontekście zrównoważonego rozwoju regionów* (Social awareness of geothermal water use in the region of Łódź, Poland and the Land of Styria, Austria in the context of sustainable development of regions). Ibidem, Łódź.
- Stazione Zoologica Anton Dohrn Napoli, 2019. Online: <http://www.szn.it> (accessed: 7 September 2019).
- Sztaba J., 2013. Rewitalizacja szansą dla regionów poprzemysłowych (Revitalisation as an opportunity for post-industrial regions). *Miscellanea Oeconomicae* 17(1): 109–119.
- Zuk M., Bierbaum A.H., Chappel K., Gorska K., Loukaitou-Sideris A., 2017. Gentrification, displacement, and the role of public investment. *Journal of Planning Literature* 20(10): 1–14. DOI: 10.1177/0885412217716439. Online: <https://www.urbandisplacement.org> › zuk_et_all_2017 (accessed: 10 September 2019).