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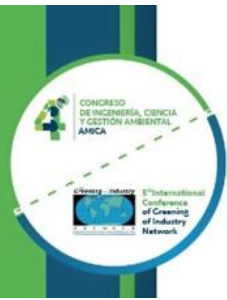
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ID 609 TOWARDS SOCIAL SUSTAINABILITY OF INDUSTRIAL PARKS: THE DUTCH CASE

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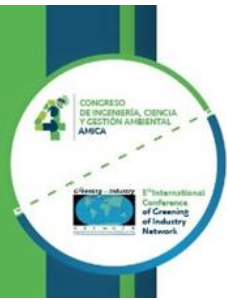
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Abstract

As the world is facing great challenges on environmental crisis, the global economic sector has become more aware of the need for moving towards sustainable economic development. In the past years, many initiatives were launched at this regard. The development of industrial parks to faster economic development, to tackle poverty and create jobs on local, regional and national levels, has played and is still playing a key role. Especially with policy makers who bare a great responsibility to facilitate the deployment of those initiatives. For instance, in the Netherlands the main focus has been put on ensuring economic prosperity and jobs for everyone. However, while much attention has been given to the economic and environmental dimension of the sustainability concept, the social dimension is less developed and therefore poorly embedded in the economic planning and activities of industrial parks. Therefore, this study is conducted to find out what the current status quo is in The Netherlands regarding the concept of social sustainability in the context of industrial parks. More specifically, the perception of key-stakeholders on social sustainability is analysed.

Throughout multi case study comparison as research method, three Dutch industrial parks were selected, observed and analysed to find out “how the concept of social sustainability is perceived by the key-stakeholders”. These cases included a sustainable industrial park, a traditional industrial park which is currently in a transformation phase into a sustainable park and a traditional industrial park. The research has revealed that currently the understandings of key-stakeholders regarding the sustainability concept in general, are mainly based on the environmental dimension. As for the social dimension of the concept, the key-stakeholders strongly associate it with ‘job creation’ for the communities despite the fact it covers many other relevant indicators as well. Furthermore, the study has revealed that an alignment regarding strategic planning and operational activities of industrial parks and individual companies is not included in the broader perspective of sustainability. This has mainly to do with the fact that a thorough understanding by the key-stakeholders regarding the concept is missing. In addition to that, the industrial parks and more specifically, individual companies are mainly profit oriented and do not see what the benefits of social sustainability might be for their business activities. However, given the limitations of this research and the little response of individual companies, the findings of this research cannot be generalized to other cases in the Netherlands. Further studies should focus on exploring the possibilities for bottom-up approaches to move industrial parks to a more social sustainable park. This could be very interesting as current approaches are mainly focused on top-down initiatives. Individual companies are profit oriented and are continuously putting the question forward: “What



is in-it for me? Why should I focus on (social) sustainability or Corporate Social Sustainability (CSR)?". Various studies conducted by researchers in the field of CSR shows that companies could benefit significantly if they operate more socially sustainable Flammer, (2015). Therefore, it could be interesting for further research to find out how to advocate for more socially sustainable industrial parks in the Netherlands, while the focus of companies should be on value creation rather than "merely" on profit making in order to expand.

Key words: Sustainability, social sustainability, industrial parks, key-stakeholders, The Netherlands.

Introduction

Today, in the face of environmental crisis, humanity is becoming more aware of the necessity to act to limit CO_{2eq} in the atmosphere. This in order to protect our planet and sustain the wellbeing of generations to come. Many initiatives and a good number of buzzwords such as: "green economy", "circular economy" and "sustainable economy" are introduced to create awareness and to move the global economy/corporations towards a more sustainable direction. According to Raworth et al., (2014), it is an urgent matter to deal in a more respectful and gratefulness manner with nature. So far, it seems that it has rather been extensively exploited for economic growth. Supporting Raworth's message, it can be here quoted what is stated in the Brundtland Report (1987): "sustainable development is not just an option anymore, but the best way forward "to safeguard the wellbeing of generations to come".

When we look into the influencers of the human development for the past two centuries, we can observe that the development of industrial sectors has been one of the important boosters behind human development and economic welfare. This is due to its positive impact on the "economic and social regional development" (Kreiner et al., 2013). For example, it contributes to the economic growth through job creation and it could be used as a constructive mechanism to tackle poverty in many areas of the world (Zhe et al., 2016). Moreover, the industrial parks development has been perceived as "a constructive channel of industrial infrastructure" which contributes significantly to (regional) economic development (Noufal, P., & Ramachandran, K.V., 2016; Sosnovskikh, S., 2017; Zhao, H., & Guo, S., 2017). However, the other side of the coin shows that if the industrial development is not sustainably planned, it could pose risks to the environment and people (IGEP and Gothmann, K., et al., (2015); Luhe Wan et al., 2017). More specifically, it could lead to environmental problems such as climate change and other related to social issues and conflicts (IPCC, 2007).

In order to ensure that the industrial development has positive impacts and the risks are minimized, a variety of international rules and regulations have been developed and implemented by institutions such as the standards of Global Reporting Initiative (GRI). Which supports the private and public sectors to better understand and communicate their impact on essential sustainability issues like the climate change and sustainable use of natural resources worldwide. Though, sustainability and sustainable development are also anchored in the social related issues of the industry, in fact, the concept of sustainable development includes three dimensions known as: Profit (economic), People (social) and Planet (environmental). This concept of sustainable development is also called 'the triple bottom line' which guides inclusive sustainable



development of i.e. industrial parks Elkington, (1994). Based on this concept, scholars have developed various frameworks to guide the public and private sectors through their strategic planning and operational management processes. The ‘Hybrid Multi-Criteria Decision-Making’ (MCDM) model is one of those frameworks which was developed to guide stakeholders of Eco-Industrial Parks (EIP) Zhao, H., & Guo, S., (2017). Another framework, which was developed by Kreiner et al. (2015), seeks to support the decision-making, planning and operational management phases of Sustainable Industrial Parks (SIP) by the key-stakeholders. This framework was elaborated under the basis of previous works of Kreiner et al. (2013), whose findings (gap analysis) denote the lack of a framework/guideline for industrial parks that has the ambition of performing “sustainably”. However, through the gap analysis and literature review it was identified that the social dimension receives far less attention by the key-stakeholders compared to environmental and economic dimensions of the sustainability concept. This issue has to do with the lack of clear methods to quantify the social factors (Axelsson et al., 2013; Cutter et al., 2015).

This un-holistic and mainly economic driven approach of policy makers and other key-stakeholders of industrial parks has led to significant investments in the development and expansion of industrial parks while less attention has been paid to innovation, transformation and re-organisation of existing industrial parks. According to Noufal, P., & Ramachandran, K.V. (2016), it is due to the significant economic contribution of industrial parks to local and regional development. That the policymakers are mainly focussing on the development and expansion of industrial parks during their strategic planning regarding regional development. This approach is also applicable to the Dutch case. The Institute for Strategic Policy Analysis (a governmental organisation), which focuses mainly on environmental and spatial planning, argues that the provincial governments in The Netherlands need to review their policies regarding the industrial sites expansion. In their report ‘*De toekomst van bedrijventerreinen: van uitbreiding naar herstructurering*’, the organisation advises to restructure the existing industrial sites, rather than expanding existing industrial sites or developing new ones. Furthermore, they state that in the process of restructuring industrial sites, social effects like cluttering of space and the loss of open space value plays a key role to ensure that land is used efficiently. They also state that since the national policy is currently focusing more on building within cities, industrial sites could get a new function. For example, it could function as a living space or a combination of a living and working space. To get an idea on how many industrial sites are currently in The Netherlands, in Figure 1 the number of sites per province are illustrated. In this regard, currently up to 250 dated industrial sites are in a transformation phase, while a significant number is prepared for demolition (see paragraph 2.4.).

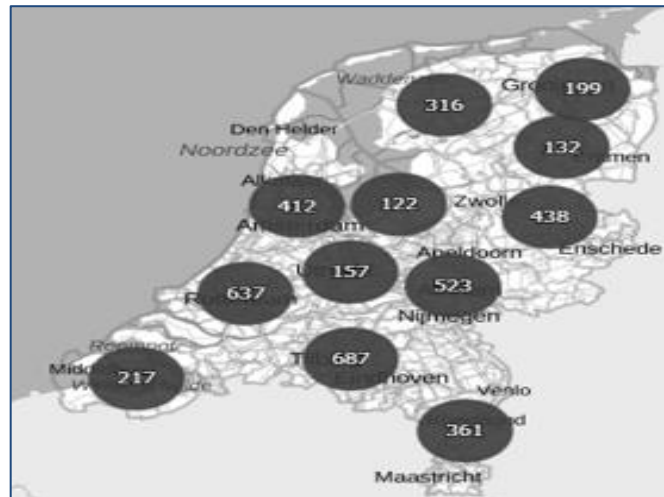


Figure 1: Number of industrial sites per province in the Netherlands (IBIS, 2019)

Objectives

The objective of this research is threefold. Firstly, it aims to find out what the perceptions of the local governments, park managers, individual companies and cooperatives (representing the Dutch companies) are regarding the social dimension of the sustainability concept (hereinafter: social sustainability). This latter with the intention to identify new factors/ indicators for social sustainability that are currently not mentioned in existing frameworks. Secondly, it aims to add academic value to the field of strategic planning and operations management since companies and industrial sites are seeking to become more sustainable and deliver not only functional products and services, but also meaningful positive effects to their regions. More specifically, it aims to add value to the activities of key-stakeholders of industrial parks regarding the strategic planning and operations management phases of SIP's. And lastly, it aims to contribute to the field of (good) governance for sustainable development at industrial sites.

Methodology

In order to conduct this research in a structured and effective manner, the research process of case study was designed according to Yin, (2014) and other scholars. The research design is illustrated in Figure 5. The starting point of the research is the problem statement and research objectives which are described in Chapter 1. From this, the research question and its related sub-questions are formulated. Based on finding the answers to the sub-questions, the research is further conducted. Following the illustration of research design, the research method, research strategy (case study and desk research) are described in detail.

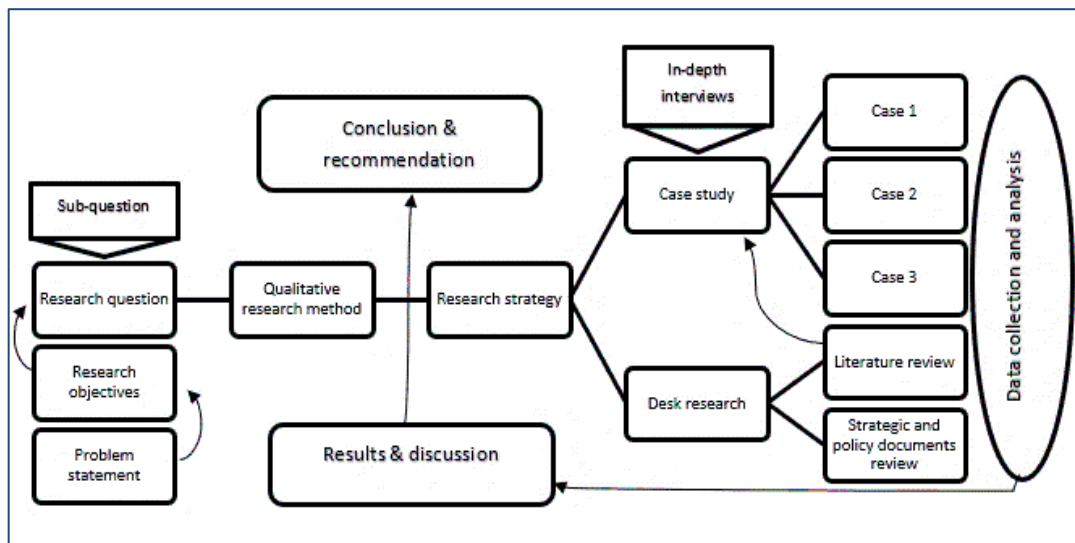


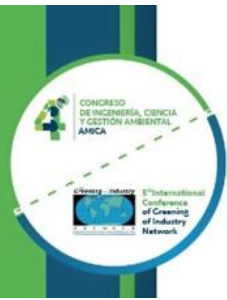
Figure 5: Research design

Selected case studies

The first industrial park selected for this study is a park that has strong similarities to a SIP but focusses mainly on the environmental aspects of the sustainability concept. It is also known as an eco-park. This park is awarded as the most SIP in the Netherlands from the energy efficiency point of view. The second case is a traditional industrial park in the transformation phase to a SIP. The third industrial park is a traditional park which is dated and needs to be transformed into a SIP. This with the purpose to safeguard its future existence. These three types of industrial parks are selected to identify if differences and similitudes among key-stakeholder's perceptions can be related to their sustainability level. The key-stakeholders of SIP's are: park managers, individual companies, employees and others. In table 4 an overview on the industrial parks' characteristics is provided.

Table 4: Selected industrial parks for case study

Feature	Case 1	Case 2	Case 3
<i>Status</i>	Eco-park awarded as most sustainable park in terms of energy efficiency	Traditional	Transformation phase into sustainable park
<i>Sector</i>	Agriculture (Agriculture & food products, logistics, horticulture etc.)	Diverse	Diverse
<i>Location</i>	Zuid-Holland, Westland	Zuid-Holland, Rotterdam	Twente, Haaksbergen
<i>Number of companies</i>	Around 100 companies	Around 35	83
<i>Number of jobs</i>	2.500	+750	+1.700



Results and Discussion

Case 1: the analysis and observations in the field show that this industrial site is doing well in terms of energy efficiency. The park manager and representatives from local government mentioned that very important investments have been made in this regard in the past years. This is reflected by the fact that the industrial site was awarded as being one of the most environmentally sustainable sites in 2016 in The Netherlands. When it comes to social sustainability, the park manager states that “between 2005-2018 the industrial site has contributed significantly (+-15%) to region’s employability opportunities”. However, other aspects of social sustainability have been addressed less. He outlines that “in this regard some efforts have been made in close cooperation with schools/ knowledge institutes, like starting a demo-school for providing non-formal education (workshops, seminars, side visits etc.) to school children and international organizations looking for best practices in agriculture development. However, more efforts are needed in the coming years to make progress. Like improving the public transportation for employees and visitors (it takes currently around 1 hour to get from The Hague central station to the industrial site while the distance is +- 15km). The social aspect is currently not thoroughly included in the strategic planning of the industrial park. The park manager mentioned that this is very “challenging since the industrial site is owned privately by a group of shareholders who are profit oriented”. This makes it difficult to convince them and the companies to invest more in social sustainability. Furthermore, the analysis shows that the perceptions of key-stakeholders regarding social sustainability is mainly based on job-creation. Their perception on the concept of sustainability is too general and focuses mainly on energy efficiency. The (social) sustainability, is currently not measured and reported.

Case 2: the analysis and field observations show that this industrial site/ business park is indeed very traditional and dated. It is a private owned space and has around 60 owners who are mainly focusing on renting their space to SMEs and earning money. Little attention is paid to the concept of sustainability in general and social sustainability. The fluctuation in companies establishing and leaving their businesses at this industrial site is very high. According to the park manager, “the owners of space and companies are mainly focusing on turnover and surviving. Our role as park managers is the one of a concierges”. However, currently due to national policy, some steps are being taken by the industrial site in cooperation with the municipality regarding energy efficiency. The perceptions of key-stakeholders on social sustainability is mainly focusing on creating jobs. The park manager and policy makers at local governmental point out that “it is up to individual companies to implement CSR and measure and report on sustainability.”. The analysis has also revealed that there is poor communication/ collaboration between the local government and the industrial site. The communities around the industrial site are not involved in the decision-making process. The only contact between the industrial site and communities are when there are complaints from the communities.

Case 3: the analysis and observations show that this industrial site is indeed in a transformation and expansion phase. The local government has the ownership of the industrial site and has currently implemented a strategic plan to transform the industrial site into a SIP. Furthermore, the analysis shows that there is a coherent communication process (annual meetings to share information and discuss strategic



developments) to in place between the local government, industrial site (park management and companies), the surrounding communities and other (key-) stakeholders. This is managed by a foundation (members: park management, companies and community representatives) and monitored by the local government. On top of that, the analysis reveals that the perceptions of key-stakeholders on social sustainability are quite advanced and in line with each other. The local government has CSR policies and agreements in place for selecting sustainable companies who want to establish their organization at the industrial site. However, (social) sustainability is not yet structurally measured and reported. According to the park manager, “we are seeking for opportunities to annually measure and report our (social) sustainability impacts.”. According to the manager, the company A, does have clear sustainability strategies in place. When the manager is asked “how it comes that your organization focusses thoroughly on the sustainability of your organisation’s activities”? The park manager stated: “it is in our DNA!, it has become part of our DNA since we have always operated environmentally and human centred since we believe that this approach will lead to more success than focussing mainly on turnover.”. As “champion” of sustainability, this organisation has taken naturally the leading role to inspire others. According to the manager, this reflects in the fact that it receives around 300 visitors from over the whole world ranging from businesses to policy makers, ambassadors and schools.

Conclusions

The study revealed that indeed a thorough understanding of the concept of sustainability and more specifically, social sustainability is missing among the majority of key-stakeholders. While the representative of the cooperative called VNO-NCW (an advocacy and lobby organisation for SME’s and multinationals in the Netherlands) and the representatives of local governments are well aware of the concept of social sustainability, at industrial parks level i.e. park managers and individual companies a thorough understanding of the concept is missing. Except for an individual company (a ‘champion’ of (social) sustainability) based at the industrial site which has embedded the concept into its strategy and activities. However, there is to some extent an alignment in the understating’s of social sustainability exist among the key-stakeholders. When asked: what does social sustainability mean to you in the context of industrial parks, the key-stakeholders unanimously replied: “job creation”. This indicates that the key-stakeholders are currently not fully aware of other relevant indicators of the concept as well. Currently, the key-stakeholders strongly associate the concept of sustainability with energy efficiency, while the concept entails more than. In addition to that, the study has revealed that due to Paris agreement regarding global environmental issues, which was also signed by the Dutch government, an ambition policy has been launched to make the Netherlands energy neutral by 2050. In extent to this, around 250 industrial sites are currently into a transformation phase to become energy neutral. As this transformation is subsidised by the government, it encourages industrial parks to become sustainable in terms of energy efficiency. As a consequence, less attention has been given to social sustainability at industrial sites and individual companies. Therefore, it completely depends on individual companies either they embed social sustainability into their strategic planning and operational activities or not. Those companies that have embedded social sustainability are based goodwill creation from marketing and communication point of view.



Furthermore, the study has revealed that currently frameworks are not in place on industrial park level and many individual companies' level to structurally measure and report (social) sustainability impacts. The local governments mainly look on how many jobs are created, but the social effects of industrial parks to the direct communities. When talking about the communities, the analysis shows that communities are poorly involved in the decision-making processes within industrial parks. Both on industrial parks level, and community level a structured and thorough collaboration is missing to move towards more social sustainability. This has mainly to do with the fact that companies are profit oriented either to survive or grow. The local governments are focussing more on the statistics regarding the job creation, while it's hardly questioned what those jobs exactly means to the surrounding communities: what are exactly to social effects of the industrial park to the surrounding communities? And how do the surrounding communities exactly think about these issues?

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