DISCUSSION ON SOLUTIONS FOR MANAGING BETTER INDUSTRIAL ZONES WITH A CASE IN THE NORTH OF VIETNAM AND RECOMMENDATION FOR ENVIRONMENTAL PROBLEMS

\textsuperscript{a} Nguyen Thi Thuy Huong, \textsuperscript{b} Phan Huy Duong,\textsuperscript{c} To Hien Tha,\textsuperscript{d} Dinh Tran Ngoc Hien

ABSTRACT

Objective: This paper purpose aims to present discussion on solutions for managing better industrial zones with a case in the north of VIETNAM and recommendation for environmental problems.

Method: Authors has uses experiences combined with observations, historical combined with dialectical materialism methods, as well as inductive and synthesis methods.

Results: after 30 years of Doi moi period, the nation need to apply and develop suitable Law such as Law 2020 (Environment) to govern environment damages and requires clusters to follow a roadmap. Also, this paper shows the conservation of nature need to be kept with the development of clusters and the pollution of environment. And for managing better industrial zones in the North of Vietnam, we refer to experiences from Taiwan and other provinces in Vietnam such as Experience in building and developing Taiwan's Industrial Parks.

Conclusion: According to regulations for industrial clusters we can understand that: first, we need to prevent loss from environment damages; Treatment of wastewater based on Law provisions; and Ensure ratio of green tree based on Law, then, Industrial clusters must have environmental protection infrastructure as prescribed. Last but not least, Then the Law 2020 (Environment) encourage investment according to law, and we need to design 1 person in charge of environment issues in clusters, as well as protecting environment according to relevant law.

Keywords: industrial clusters, problems, environmental law, regulations, rules, revisions, environmental crimes, solutions.

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DISCUSSÃO SOBRE SOLUÇÕES PARA GERENCIAR MELHORES ZONAS INDUSTRIAIS COM UM CASO NO NORTE DO VIETNÃ E RECOMENDAÇÃO PARA PROBLEMAS AMBIENTAIS

RESUMO

Objetivo: Este artigo tem como objetivo apresentar a discussão sobre soluções para a gestão de melhores zonas industriais com um caso no norte do VIETNÃ e a recomendação para problemas ambientais.

Método: Os autores utilizam experiências combinadas com observações, histórico combinado com métodos de materialismo dialético, bem como métodos induitivos e de síntese.

Resultados: após 30 anos do período Doi moi, a nação precisa aplicar e desenvolver uma Lei adequada, como a Lei 2020 (Meio Ambiente), para reger os danos ambientais e exige que os clusters sigam um roteiro. Além disso, este artigo mostra que a conservação da natureza precisa ser mantida com o desenvolvimento de aglomerados e a poluição do ambiente. E para gerenciar melhores zonas industriais no norte do Vietnã, nos referimos a experiências de Taiwan e outras províncias do Vietnã, como a Experiência na construção e desenvolvimento de Parques Industriais de Taiwan.

Conclusão: De acordo com os regulamentos para aglomerados industriais, podemos entender que: primeiro, precisamos evitar a perda de danos ambientais; Tratamento de águas residuais com base em disposições legais; e garantir a proporção de árvore verde com base na lei, então, os aglomerados industriais devem ter infraestrutura de proteção ambiental conforme prescrito. Por último, mas não menos importante, Então a Lei 2020 (Meio Ambiente) incentivar o investimento de acordo com a lei, e precisamos projetar 1 pessoa responsável por questões ambientais em clusters, bem como proteger o meio ambiente de acordo com a lei relevante.

Palavras-chave: aglomerados industriais, problemas, legislação ambiental, regulamentos, regras, revisões, crimes ambientais, soluções.

1 INTRODUCTION

Currently, Vietnam's concept of industrial cluster is different from foreign concepts:

i) The main goal of establishing and developing industrial clusters abroad is to enhance enterprises competitiveness and reduce environment pollution (or control it) as well as SMEs growth with productivity;

ii) Members participating in industrial clustering abroad are quite extensive, including suppliers, manufacturing facilities, service organizations, universities and institutes that have relationships with each other in the product value chain export; In Vietnam, industrial clusters only focus on production and business establishments that are related to each other mainly in the common use of infrastructure and in environmental treatment.

iii) The level and nature of economic linkages between members of foreign
industrial clusters are higher than those in Vietnam.

Industrial parks and industrial sites are closely related to industrial clusters because they are both forms of organizing production based on territory and in general they are similar in purpose and content of activities, only different in level and level. develop.

Thus, unlike concentrated industrial parks, industrial parks have a smaller scale (usually less than 50 hectares), and have lower standards for infrastructure and environmental treatment. Industrial parks are established by the decision of the Provincial/City People's Committee, while industrial parks are established by the Prime Minister's decision. The establishment of an Industrial Park is to attract domestic and foreign industrial production enterprises at all levels, while the purpose of establishing an Industrial Park is to relocate, arrange and attract manufacturing establishments. exports, SMEs, etc.,

Industrial sites are small in scale (usually less than 10 hectares) and do not meet the same conditions as industrial clusters, but in essence they are also a form of expression of low-level industrial clusters. Industrial site is "a concentrated location for production and services serving the production of local industry establishments (households, individuals, groups, cooperative groups, cooperatives) and in case of Specifically, there may be a number of small-scale enterprises in that locality with occupations suitable to the goals of the industrial and handicraft site; Separated from residential areas, there is a common technical infrastructure system built synchronously, ensuring full conditions for convenient, safe and sustainable production. Industrial and industrial centers are mainly located in a commune (ward, town), decided by the district People's Committee after receiving approval of the Provincial People's Committee's policy" [70]. Unlike industrial sites, industrial parks usually have a scale of over 10 hectares and can be located in two or more communes (wards, towns).

Hanoi city government requires:
- Industrial cluster is a place where industrial production and industrial services are concentrated; has a defined geographical boundary, has a separate fence, and is not inhabited; There is a common technical infrastructure system built synchronously, ensuring all conditions for convenient, safe and sustainable production and business.
- CCN/cluster is an industrial complex invested in and built to serve the needs of
expanding production premises of production establishments in craft villages (craft village enterprises, cooperatives, production households), develop occupations and craft villages and overcome environmental pollution in craft villages. [66, article 2]

Next Janku et al (2020) stated that in case of Czech state and Czech citizens there is low usage of agri land and there is land occupation. The results also show the poor land use policy in relation to the soil protection. And Huy, DTN et al (2021) pointed that clusters need to be built based on planning of the State as a new territory form. Therefore, we see shortcomings in cluster development /construction and building (Needham et al. 2013) as well as serious damages caused by floods / surfaces by agri land (Lee & Brody 2018).

Then, MANAGEMENT AND INVESTMENT IN DEVELOPMENT OF INDUSTRIAL CLUSTER IN HANOI CITY IN 2023 - issued plan for management and investment clusters in the city:

With detailed goals:

- Renovate and complete technical infrastructure of industrial clusters operating in Hanoi city (including: internal traffic, sidewalks, trees, water supply, drainage, wastewater treatment, waste water treatment, etc.) solid waste, power supply, public lighting, internal communications, operating houses, protective fences and other structures serving the operations of industrial clusters) within the fences of industrial clusters that meet the requirements requirements in Decree No. 68/2017/ND-CP dated May 25, 2017 of the Government on management and development of industrial clusters.

- Complete procedures, strive to start construction of technical infrastructure for 10 to 20 industrial clusters established in the period 2018 - 2020.

- Decide to establish and expand from 5 to 10 industrial clusters.

- 100% of newly built industrial clusters have wastewater treatment stations that meet corresponding national standards or technical regulations.

- 100% of industrial clusters and craft village industrial clusters that have been put into operation have wastewater treatment stations that meet corresponding national standards or technical regulations.

Next, CONTENT: 1. Review planning and development proposals for industrial cluster development in the City

2. Develop mechanisms and policies to develop industrial clusters
3. Organize the management and development of industrial clusters already in operation

THE LAW on ENVIRONMENTAL PROTECTION Law No: 72/2020/QH14

Hanoi, November 17, 2020

Figure 1 - Article 4

Figure 2 - Environment pollution
2 MATERIAL AND METHOD

2.1 METHODOLOGY

Authors have used qualitative and analytical methods, descriptive method for primary model, synthesis and discussion methods in this paper. We also used historical materialism method.

3 RESULTS

Main findings

Background information

We see below list of some Hanoi industrial cluster expanded:

<table>
<thead>
<tr>
<th>No</th>
<th>Industrial cluster</th>
<th>Location</th>
<th>Area (ha)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Liên Hiệp</td>
<td>H. Phúc Thọ</td>
<td>20</td>
<td>Operating</td>
</tr>
<tr>
<td>2</td>
<td>Đắc Sơ</td>
<td>H. Hoài Đức</td>
<td>6</td>
<td>Operating</td>
</tr>
<tr>
<td>3</td>
<td>Cầu Nổi-Văn Canh</td>
<td>H. Hoài Đức</td>
<td>5</td>
<td>Operating</td>
</tr>
<tr>
<td>4</td>
<td>La Phú</td>
<td>H. Hoài Đức</td>
<td>8</td>
<td>Operating</td>
</tr>
<tr>
<td>5</td>
<td>Di Trạch</td>
<td>H. Hoài Đức</td>
<td>10</td>
<td>Operating</td>
</tr>
<tr>
<td>6</td>
<td>Sơn Đông</td>
<td>H. Hoài Đức</td>
<td>25</td>
<td>Operating</td>
</tr>
<tr>
<td>7</td>
<td>Dương Liêu</td>
<td>H. Hoài Đức</td>
<td>12</td>
<td>Operating</td>
</tr>
<tr>
<td>8</td>
<td>Đại Tự</td>
<td>H. Hoài Đức</td>
<td>8</td>
<td>Operating</td>
</tr>
<tr>
<td>9</td>
<td>Phùng Xá 1</td>
<td>H. Thạch Thất</td>
<td>10</td>
<td>Operating</td>
</tr>
<tr>
<td>10</td>
<td>Phùng Xá 2</td>
<td>H. Thạch Thất</td>
<td>4</td>
<td>Operating</td>
</tr>
<tr>
<td>11</td>
<td>Bình Phú</td>
<td>H. Thạch Thất</td>
<td>16</td>
<td>Operating</td>
</tr>
<tr>
<td>12</td>
<td>Kim Quan</td>
<td>H. Thạch Thất</td>
<td>11</td>
<td>Operating</td>
</tr>
<tr>
<td>13</td>
<td>Canh Nậu</td>
<td>H. Thạch Thất</td>
<td>10</td>
<td>Operating</td>
</tr>
<tr>
<td>14</td>
<td>Chàng Sơn</td>
<td>H. Thạch Thất</td>
<td>15</td>
<td>Operating</td>
</tr>
</tbody>
</table>

(Source: baothainguyen.vn)
15 Dan Phưng | H. Dan Phưng | 28 | Operating
16 Sông Cúng | H. Dan Phưng | 6 | Operating
17 Liên Hà | H. Dan Phưng | 30 | Operating
18 Tân Hội | H. Dan Phưng | 15 | Operating
19 TT Quốc Oai | H. Quốc Oai | 10 | Operating
20 Phú Thịnh | TX. Sơn Tây | 9 | Operating
21 Phung Châu | H. Chương Mỹ | 10 | Operating
22 Đông Sơn | H. Chương Mỹ | 5 | Operating
23 Đại Yến | H. Chương Mỹ | 6 | Operating
24 Thanh Thủy | H. Thanh Oai | 6 | Operating
25 Đà Sỹ | Q. Hà Đông | 13 | Operating
26 Văn Phúc | Q. Hà Đông | 15 | Operating
27 Duyên Thái | H. Thường Tín | 13 | Operating
28 Văn Diệm | H. Thường Tín | 7 | Operating
29 Ninh Sở | H. Thường Tín | 5 | Operating
30 Tiến Phong | H. Thường Tín | 8 | Operating
31 Hòa Bình | H. Thường Tín | 7 | Operating
32 Chuyên Mỹ | H. Phú Xuyên | 7 | Operating
33 Phú Túc | H. Phú Xuyên | 7 | Operating
34 Phương Xá | H. Mỹ Đức | 10 | Operating
35 Xà Cầu | H. Ứng Hòa | 8 | Operating
36 Cầu Bầu | H. Ứng Hòa | 5 | Operating
37 Tấn Triệu | H. Thanh Trì | 10 | Operating
38 Vân Hà | H. Đông Anh | 3 | Operating
39 Liên Hà | H. Đông Anh | 10 | Operating
40 Bát Tràng | H. Gia Lâm | 17 | Operating
41 Kiều Ky | H. Gia Lâm | 13 | Operating
42 An Thường | H. Hoài Đức | 10 | Old planed, not yet construct
43 Cát Quế | H. Hoài Đức | 10 | Old planed, not yet construct
44 Đức Giang | H. Hoài Đức | 10 | Old planed, not yet construct
45 Đồng La | H. Hoài Đức | 5 | Old planed, not yet construct
46 Song Phưng | H. Hoài Đức | 10 | Old planed, not yet construct
47 Tân Hòa | H. Quốc Oai | 13 | Old planed, not yet construct
48 Tuyệt Nghĩa | H. Quốc Oai | 10 | Old planed, not yet construct
49 Nghĩa Hường | H. Quốc Oai | 6 | Old planed, not yet construct
50 Đông Quang | H. Quốc Oai | 5 | Old planed, not yet construct
51 Thạch Thán | H. Quốc Oai | 5 | Old planed, not yet construct
52 Công Hòa | H. Quốc Oai | 10 | Old planed, not yet construct
53 Liệp Tuyệt | H. Quốc Oai | 10 | Old planed, not yet construct
54 Dị Nâu I | H. Thạch Thất | 5 | Old planed, not yet construct

(Source: author synthesis)
3.1 EXISTING PROBLEMS IN INDUSTRIAL ZONES

Regarding industrial park (IZ) construction planning, the Ministry of Construction said, according to the provisions of Decree No. 35/2022/ND-CP dated May 28, 2022 of the Government on the management of industrial parks and economic zones, The area expected to invest in the construction of urban - service areas (belonging to industrial - urban - service zones) must meet conditions consistent with provincial planning and urban planning in the province and centrally run city. (Point a, Clause 2, Article 34).

After completing investment procedures in accordance with the law on investment and the provisions of this Decree, the implementation of construction and management of functional subdivisions in industrial - urban - service zones shall be carried out in accordance with regulations. of the law corresponding to functional subdivisions (Clause 4, Article 35).

According to the provisions of National Technical Regulations on construction planning - QCVN 01:2021/BXD issued together with Circular No. 01/2021/TT-BXD dated May 19, 2021 of the Ministry of Construction in section 2.5. 1: Civil functional areas (if any) planned in association with industrial parks must apply the same regulations as for civil areas in urban areas; Planning criteria apply according to Point 2.1, Point 2.2, Point 2.3, Point 2.4 and Point 2.6 of the Regulations.

Thus, industrial - urban - service zones are formed and determined on the basis of provincial planning and urban planning in the province and centrally run city; Subdivision planning and detailed planning are prepared according to legal regulations on construction planning for industrial functional areas, according to legal regulations on urban planning for urban - service functional areas.

(source: tapchixaydung.vn).

**BASIS OF PROVISION OF ENVIRONMENTAL CRIMINES IN Criminal Law**

*Firstly, the regulation of environmental protection products comes from the increasing danger to society of environmental violations that appear during the renovation process of the country.*

Law is nothing but the legal form of social relations. Law, therefore, is the legal garment of social life. For PLHS, that is no exception. However, the specific task of criminal law is mainly to protect social relations from bad impacts from acts that are dangerous to society. In the field of TPMT, Europol reports the impacts of
ENVIRONMENTAL CRIMINES (TPMT) as (i) increasing pollution levels; (ii) decline in wildlife; (iii) reduced biodiversity; (iv) disturbance of ecological balance. The damage that TPMT causes to ecosystems and people are (i) the risk of disease; (ii) environmental disasters;

(iii) irreversible climate change; (iv) contamination of the food chain; (v) reduced lifespan; (vi) causing human death. Despite such a dire impact, ENVIRONMENTAL CRIMINES sanctions are low because they are difficult to detect and make it an attractive piece of cake for organized crime. Therefore, it is necessary to take the most severe measures in handling TPMT.

From violations in environment and damages from such events, Vietnam has developed law 2020 (environment) and relevant documents; acts of taking advantage of the policy of economic integration, transnational TPMT to transport and trade in banned natural products and wastes from developed countries to developing countries; enterprises that do not invest or invest in waste treatment systems but actually do not use them or operate them only in a formal way to reduce costs, increase profits, and deal with inspection teams; acts of using tricks to bribe or bribe competent officials to approve documents on environmental impact assessment reports or to ignore environmental violations. In addition, the acts of environmental law enforcement and environmental law are closely related to many other crimes, often position crimes such as corruption crimes, economic crimes (smuggling crimes). In addition, with crimes related to the act of transporting, using hazardous waste or the act of storing, transporting and using products from wild and rare animals often stemming from fraudulent acts such as: smuggling goods, making false declarations in customs declarations because these are prohibited acts by law. Those who commit illegal acts must take advantage of smuggling to carry out ENVIRONMENTAL CRIMINES (TPMT). Therefore, TPMT is often difficult to handle because it may have been handled for another crime related to the same case, an act, but in fact, TPMT becomes serious because it is the next consequence. connection of another crime, usually a crime of position and an economic crime, so it is easy to confuse and difficult to handle properly.

4 DISCUSSION AND CONCLUSION

For managing better industrial zones in the North of Vietnam, we refer to experiences from Taiwan and other provinces in Vietnam such as:

*Experience in building and developing Taiwan's Industrial Parks*
Taiwan is a small archipelago located in the East Sea, with geographical characteristics and limited resources. In order to survive and develop, since the late 50s, the Taiwanese government has determined to build an economic model according to "outward-looking mechanism" which focuses on industrial development. Building and developing the industrial park model is considered a pivotal strategy to create momentum of Taiwan’s economy.

Vietnam can have lessons from experiences of Taiwan in building/constructing clusters as follows:

+ Taiwan experienced in construction see below ration allocating for land using:

- 2.3% housing construction
- 33% environment protection
- 60% land production
- 4.8% facilities

+ Taiwan did a good job in finishing infrastructures water and waste treatment and surrounding utilities such as banks, ports, etc.

+ Taiwan has performed encouraging policy with low rate of tax and exemption (tax) for more investment attraction in clusters

+ Regarding the State management mechanism, resolving issues related to activities of industrial zones such as investment licensing, customs, taxes... is conducted
according to the "one-stop shop" mechanism. The Central Government clearly stipulates that people who need to handle work only need to go to one place, where the process and deadline for handling the work will be publicly announced. The place receiving the dossier will be responsible for urging and handling the work at the next stages and returning the results on time to those in need. In addition, the Taiwanese government's policies do not follow rigid principles but are always innovated according to the actual situation.

Next, Vietnam industrial cluster enterprises may refer to good corporate governance standards in below fig to apply:

![Fig 4 - Relatively good corporate governance](source: Pham Minh Dat et al, 2020)

Next, Industrial and handicraft establishments that have been oriented for new development according to planning need to ensure that they do not disrupt the spatial structure, technical infrastructure, and social infrastructure of communes with industrial clusters and copper connections. infrastructure and transportation for CCN operations, ensuring environmental protection and safety requirements, without adversely affecting the surrounding environment and landscape in the area.

Experiences in Vietnam provinces:
Nam Dinh is the province with many encouraging policies for clusters investment among the provinces in the Red River Delta. (see below fig 5)

Finally, according to regulations in Clause 1, Article 52 of the Law 2020 (Environment) for industrial clusters we can understand that:

- Need to prevent loss from environment damages;
- Treatment of wastewater based on Law provisions;
- Ensure ratio of green tree based on Law

=>> Industrial clusters must have environmental protection infrastructure as prescribed above.

Next, Pursuant to Article 52 of the Law 2020 (Environment) specify requirements:

- Finish infrastructure of clusters/zones

=>> Operating industrial clusters must meet the requirements as prescribed above.

Then the Law 2020 (Environment) govern:

- Encourage investment according to law
- Design 1 person in charge of environment issues in clusters
- Protecting environment according to relevant law
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