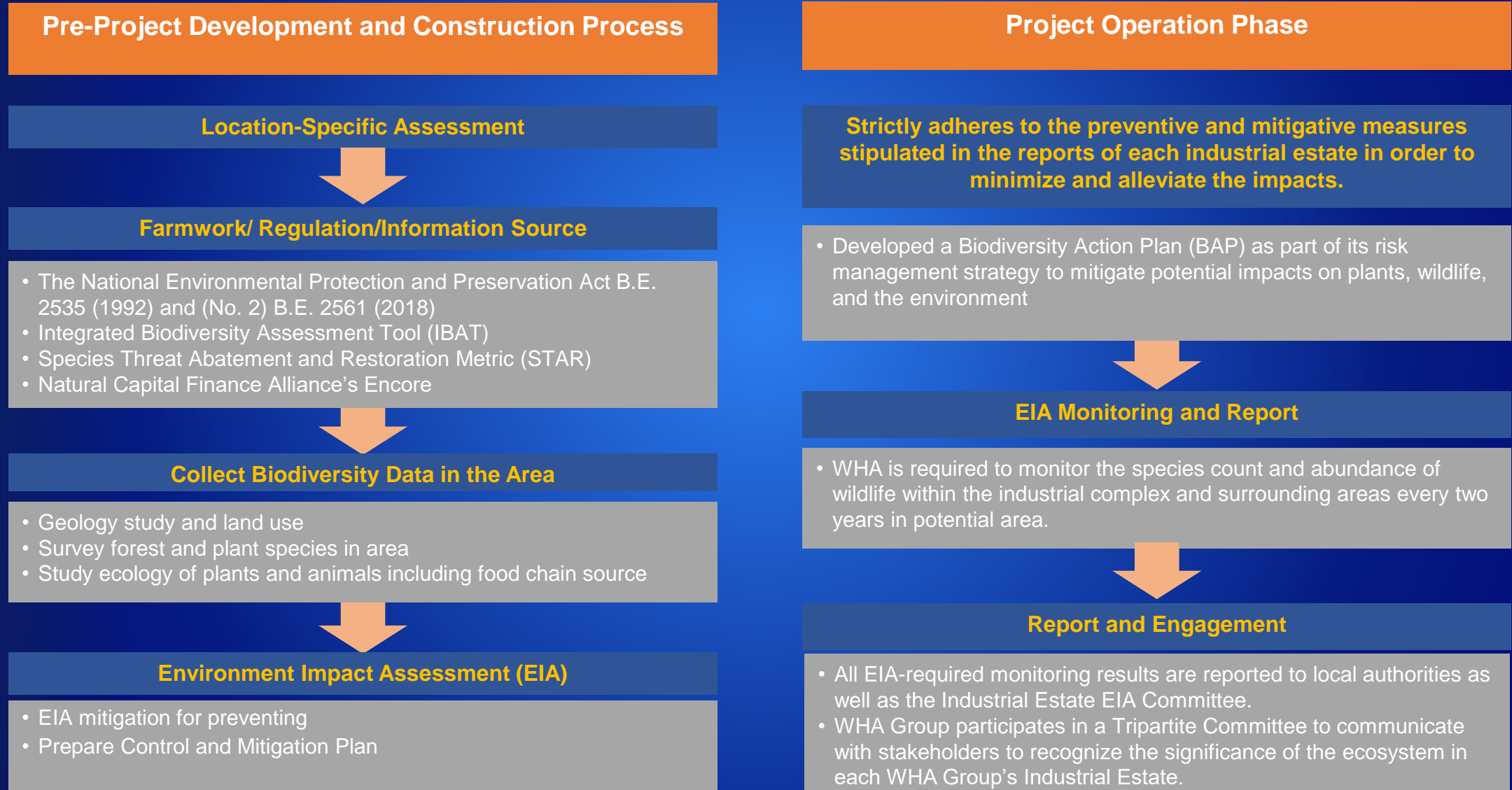


# WHA Group Biodiversity Assessment and Monitoring System



WHA employs a comprehensive system to ensure the organization's collective adherence biodiversity regulations as well as mandatory standards integrated into multi-disciplinary a group-wide level.



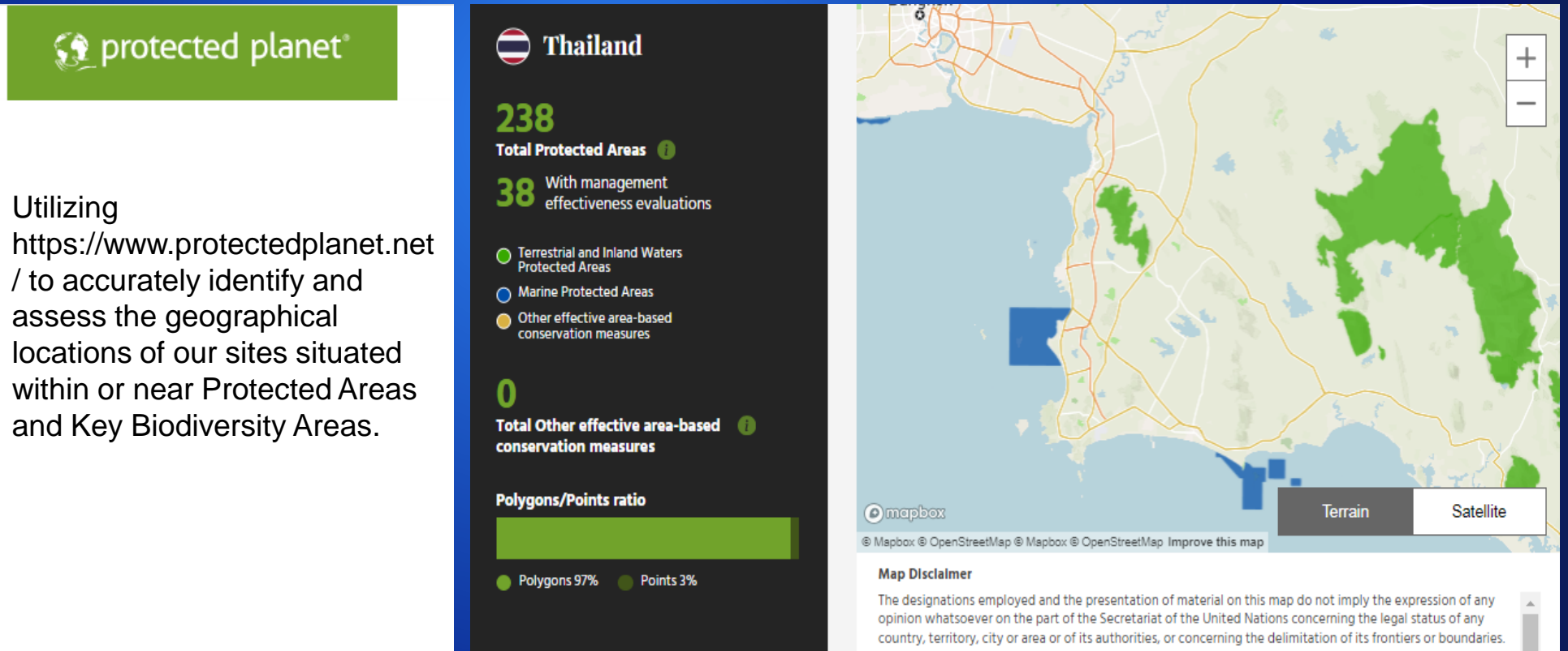
# WHA Group Biodiversity Assessment and Monitoring System



## Location-Specific Assessment

Following the EIA process, it was highlighted that 2 out of 11 total WHA industrial estates (Total 4,167 rai or 666.72 hectares) were identified to have biodiversity concerns due to their proximity to protected areas.

These two industrial estates are WHA Chonburi Industrial Estate 2 (WHA CIE 2) which has an area of 631 rai or 101 hectares and WHA Eastern Seaboard Industrial Estate 2 (WHA ESIE 2), which has an area of 3,536 rai or 566 hectares and is located near Khao Khiao-Khao Chompu Wildlife Sanctuary in Chonburi province.



# WHA Group Biodiversity Assessment and Monitoring System



## Scope of the Assessment and Biodiversity Exposure

Type of Site	Location	Site	Areas	Exposure	Assessment	Management Plan
Own Operations	Chonburi	WHA Chonburi Industrial Estate 2 (WHA CIE 2)	631 rai or 101 hectares	located near Khao Khiao-Khao Chompu Wildlife Sanctuary in Chonburi province.	Impact Assessment :EIA • Terrestrial : No impact • Marine: No impact	• Monitoring ambient air quality and provide support for research conducted by local forest conservation organizations or educational institutions on the effects of industrial operations on the ecosystem.
	Chonburi	WHA Eastern Seaboard Industrial Estate 2 (WHA ESIE 2)	3,536 rai or 566 hectares			
Adjacent Area	Chonburi	Khao Khiao-Khao Chompu Wildlife Sanctuary	90,438 rai or 14,470 hectares	Wildlife sanctuary located near WHA industrial estates that have biodiversity concerns.	A baseline study of each biodiversity parameter (phytoplankton, zooplankton, aquatic animals, aquatic plants, and benthos) was conducted to allow for comparison with monitoring result.	WHA ensures the business development to comply with forest and biodiversity regulations with following tools. • Procedure of Risk Assessment as ISO requirement. • Biodiversity measurement and evaluation of change. • EIA Monitoring report.
Upstream & Downstream	Chonburi & Rayong	Supply chain located in WHA CIE 2 and WHA ESIE 2	4,167 rai or 667 hectares	Aquatic ecology within the canal into which the industrial estate Withdraw water and discharges its treated wastewater.	A baseline study of each biodiversity parameter (phytoplankton, zooplankton, aquatic animals, aquatic plants, and benthos) was conducted to allow for comparison with monitoring result.	Biodiversity risks at are re-assessed every two years, as required by the EIA, to investigate changes and additional impacts caused by industrial developments on forest resources and wildlife.

# WHA Group Biodiversity Assessment and Monitoring System



## Impact-related Biodiversity

Using the Risk Assessment Tool, WHA has evaluated of the influence of pollution on biodiversity encompassing water, air, noise, and waste. The analysis indicates that the biodiversity risk remains minimal due to pollution levels adhering to acceptable environmental benchmarks. Furthermore, the evaluation of WHA's effects reveals that the likelihood of noteworthy impact remains low, attributed to the considerable close area between WHA and the protected or key biodiversity areas.



## Dependency-related Biodiversity Risk

The dependency indicators that is classified to be high priority

Risk	Water Scarcity	Landslides	Tropical Cyclones	Air Pollution	Extreme Heat
Mitigation Actions	Produce water reclamation to reduce natural water dependency	Prevent the issue starting from the industrial estates design phase	Prevent the issue starting from the industrial estates design phase	There are laws regulating air quality in WHA industrial estates	There is building design that aligns with Green Building principles, ensuring proper air circulation.

# WHA Group Biodiversity Mitigation Actions



**WHA Group has embraced a comprehensive strategy for biodiversity conservation, guided by the mitigation hierarchy. To minimize negative impacts on biodiversity and ensure No Net Loss and No Deforestation, five key mitigation actions have been implemented as follows:**

<b>AVOID</b>	<p>To prevent environmental harm, WHA Group focuses on avoiding activities that could negatively affect nature. The following measures are part of WHA Group's avoidance strategy:</p> <ul style="list-style-type: none"> <li>• Commitment to avoiding any business activities within critical biodiversity areas</li> <li>• Implementing a group-wide Environmental Quality, Energy Conservation and Biodiversity Policy to effectively manage all waste types, ensuring no adverse impact on ecosystems</li> <li>• Undergoing biodiversity risk assessment and Environmental Impact Assessment (EIA) to define potential risks and determine mitigation plan to minimize impacts before construction or operations</li> <li>• Prohibiting operations in areas registered by the United Nations Educational, Scientific and Cultural Organization (UNESCO), World Heritage Sites, protected areas under IUCN Category HIV</li> <li>• Establishing sustainable construction and clean construction practices</li> </ul>
<b>REDUCE</b>	<p>WHA Group seeks to minimize or reduce dependency on natural resources through various strategies, including modifying production processes, redesigning products, enhancing product stewardship, evolving business models, and engaging with suppliers. The following actions are integral to this reduction strategy:</p> <ul style="list-style-type: none"> <li>• Developing water reclamation system to minimize dependency on natural water sources and reusing wastewater for the ultimate benefit</li> <li>• Green building construction by selecting environmentally friendly construction materials and avoiding materials that emit volatile organic compounds (VOCs) and those containing asbestos</li> <li>• Initiating WeCYCLE projects to reduce waste and emissions from waste management by transforming used PET plastics, paper, and oil into upcycled products</li> <li>• Enhancing supplier engagement to raise awareness of natural resource dependency in order to minimize negative impacts on the environment and biodiversity throughout the value chain</li> </ul>
<b>REGENERATE</b>	<p>WHA Group focuses on the sustainable and holistic revitalization of existing properties or areas, prioritizing environmental, social, and economic factors. This process includes designing, constructing, and managing assets and communities in a manner that restores natural systems, improves social well-being, and promotes economic prosperity. For example:</p> <ul style="list-style-type: none"> <li>• Forest conservation projects to plant trees such as resin trees, sarapee trees, trumpet trees, and angšana trees to prevent the loss of biodiversity in our operational areas</li> <li>• Compensatory forest plantation in another area which is equal to or larger than the area affected by the company's deforestation</li> <li>• Establishing biodiversity action plans to guide the implementation of projects that may pose high risk to biodiversity to further properly monitor and mitigate the impacts</li> </ul>
<b>RESTORE</b>	<p>WHA Group has consistently collaborated with government agencies, the private sector, and local communities to restore and strengthen forest ecosystems. This helps increase green space as oxygen producing zones and the new lungs for the community, reduce GHG to mitigate global warming, and encourage sustainable business practices among industrial estate enterprises such as:</p> <ul style="list-style-type: none"> <li>• Reforestation projects in green areas around WHA Group's industrial estates to increase green spaces and enhance the integrity of the ecosystem</li> <li>• Adding oxygen in wastewater before discharging it into public water sources such as installing cascades at WHA Eastern Seaboard Industrial Estate 2 (WHA ESIE 2) and WHA Eastern Seaboard Industrial Estate 4 (WHA ESIE 4) to increase the oxygen levels in the water resulting in a clean water for marine species</li> </ul>
<b>TRANSFORM</b>	<p>Efforts are made to address the underlying causes of nature loss. This strategy includes forming partnerships and advocating for stronger policies related to nature and climate change. WHA Group's transformation initiatives include the following actions:</p> <ul style="list-style-type: none"> <li>• Partnerships with diverse supply chains and sectors to promote solar electricity production in order to reduce GHG emissions such as cooperating with the Electricity Generating Authority of Thailand (EGAT) to implement peer-to-peer energy trading system, and collaborating with PTT Plc. and Sertis Co., Ltd. to develop a solar energy trading platform</li> <li>• Collaboration with partners from leading educational institutions, private companies, and public sectors to establish Thailand CCUS Consortium, enhancing the competitiveness in CCUS technology</li> <li>• Promoting the transition from fuels to clean energy by using EVs, installing EV charging stations which uses renewable energy as a power source for our employees and customers</li> <li>• Supporting government initiatives to advance climate and nature-related goals such as carbon neutrality and net zero GHG emissions by implementing environmental management technologies</li> <li>• Applying technologies in our operations such as "smart inspection" using drone for warehouse inspection and "smart metering" to track water and electricity usage through digital system to reduce GHG emission from our transportation activities</li> </ul>