No.	Assets	EN11			EN12		
		High-Very High	Moderate	Low	High-Very High	Moderate	Low
1	Ban Rong Po LPG Terminal			☑			☑
2	Khao Bo Ya LPG Terminal			☑			☑
3	Sri Racha Oil Terminal			☑			☑
4	Khanom Gas Separation Plant	☑			☑		
5	Rayong Gas Separation Plant			☑			☑

Biodiversity and Ecosystem Service Risk Assessment Tool

Facility Information and Risk Assessment Result Summary
ข้อมูลพื้นที่ปฏิบัติการและผลประเมินความเสี่ยง

Facility Name: ชื่อพื้นที่ปฏิบัติการ:	Ban Rong Po LPG Terminal
Company Name: ชื่อบริษัท:	PTT
Address/Location: ที่อยู่:	222/115 Moo 5 Banglamung Subdistrictm Banglamung District
Facility Description: รายละเอียดพื้นที่ปฏิบัติการ	

Biodiversity Risk Assessment Result
ผลการประเมินความเสี่ยงด้านความหลากหลายทางชีวภาพและบริการของระบบนิเวศ

EN11	Low
EN12	Low

Biodiversity and Ecosystem Service Risk Assessment Tool

Facility Information and Risk Assessment Result Summary
ข้อมูลพื้นที่ปฏิบัติการและผลประเมินความเสี่ยง

Facility Name: ชื่อพื้นที่ปฏิบัติการ:	Khao Bo Ya LPG Terminal
Company Name: ชื่อบริษัท:	PTT
Address/Location: ที่อยู่:	50 Moo 3 Tungsukla, Sriracha District
Facility Description: รายละเอียดพื้นที่ปฏิบัติการ	

Biodiversity Risk Assessment Result
ผลการประเมินความเสี่ยงด้านความหลากหลายทางชีวภาพและบริการของระบบนิเวศ

EN11	Low
EN12	Low

Biodiversity and Ecosystem Service Risk Assessment Tool

Facility Information and Risk Assessment Result Summary
ข้อมูลพื้นที่ปฏิบัติการและผลประเมินความเสี่ยง

Facility Name: ชื่อพื้นที่ปฏิบัติการ:	Sri Racha Oil Terminal
Company Name: ชื่อบริษัท:	PTT
Address/Location: ที่อยู่:	123 Moo 2 Tungsukla Subdistrict, Sriracha District
Facility Description: รายละเอียดพื้นที่ปฏิบัติการ	

Biodiversity Risk Assessment Result
ผลการประเมินความเสี่ยงด้านความหลากหลายทางชีวภาพและบริการของระบบนิเวศ

EN11	Low
EN12	Low

Biodiversity and Ecosystem Service Risk Assessment Tool

Facility Information and Risk Assessment Result Summary
ข้อมูลพื้นที่ปฏิบัติการและผลประเมินความเสี่ยง

Facility Name: ชื่อพื้นที่ปฏิบัติการ:	Khanom Gas Separation Plant
Company Name: ชื่อบริษัท:	PTT
Address/Location: ที่อยู่:	123 Moo 8, Thong Nian Subdistrict, Khanom District
Facility Description: รายละเอียดพื้นที่ปฏิบัติการ	

Biodiversity Risk Assessment Result
ผลการประเมินความเสี่ยงด้านความหลากหลายทางชีวภาพและบริการของระบบนิเวศ

EN11	Very High
EN12	Very High

Biodiversity and Ecosystem Service Risk Assessment Tool

Facility Information and Risk Assessment Result Summary
ข้อมูลพื้นที่ปฏิบัติการและผลประเมินความเสี่ยง

Facility Name: ชื่อพื้นที่ปฏิบัติการ:	Rayong Gas Separation Plant
Company Name: ชื่อบริษัท:	PTT
Address/Location: ที่อยู่:	555 Sukhumvit Road, Mab Ta Phud Subdistrict, Muang District
Facility Description: รายละเอียดพื้นที่ปฏิบัติการ	

Biodiversity Risk Assessment Result
ผลการประเมินความเสี่ยงด้านความหลากหลายทางชีวภาพและบริการของระบบนิเวศ

EN11	Low
EN12	Low

Biodiversity and Ecosystem Service Risk Assessment Tool

BES Risk Assessment Tool Methodology
ระเบียบวิธีการใช้เครื่องมือการประเมินความเสี่ยงด้านความหลากหลายทางชีวภาพและบริการของระบบนิเวศ

1) METHODOLOGY
หลักการใช้งาน

The GRI reporting protocols have been used to define the methodology and approach for the risk assessment (GRI, 2011).

The Guideline provides details on the relevance of the chosen indicators (EN11 & EN12), the approach used to define relevant definitions, compile information and describe information sources.

A flow chart to complete assessments for EN11 and EN12 is at Figure 2.1. The flow chart also includes the relationship to the development and review of Biodiversity Action Plans for High Risk sites.

1.1) Biodiversity Indicator - EN11 (GRI Disclosure 304-1)
ดัชนีชี้วัดความหลากหลายทางชีวภาพ EN11

Return to EN11

Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

Indicator EN11 enables PTT Group to identify assets that are in or near sensitive biodiversity areas. This includes land that lies within, contains, or is adjacent to legally protected areas (national parks), as well as areas of high biodiversity value outside protected areas (such as Key Biodiversity Areas, World Heritage Areas, Ramsar sites, as defined below). Areas of high biodiversity value are those areas that play host to a diversity of species and provide habitats in a natural or semi natural form. These areas are usually important habitat for threatened species.

Using information on the proximity of assets to these sensitive biodiversity receptors, PTT Group can identify and understand the potential risks involved. Monitoring what activities are taking place in or near both protected areas and areas of high biodiversity value outside protected areas makes it possible for PTT Group to reduce the risks of impacts through careful asset management and control.

The risk that is posed by failure to adequately manage such impacts on biodiversity include reputational damage, delays in obtaining planning permission, and the loss of a social license to operate.

Table 1.1 outlines the measurement parameters used and the information sources for assessing PTT Group assets for indicator EN11.

Table 1.1: Measurement parameters and information sources for indicator EN11

Measurement	Information Source
- Geographic location; - Type of asset; - Size of operational asset in km2; - Description of land that owned, leased, or managed by PTT Group; - Position (distance) in relation to protected area and high biodiversity value area outside protected area; - Biodiversity value characterized by the attribute of the protected area and high biodiversity value area outside of the protected area (terrestrial, freshwater, or maritime ecosystem); & the listing of protected status (e.g., IUCN Protected Area Management Category, Ramsar Convention, national legislation).	- Integrated Biodiversity Assessment Tool (IBAT); - Ramsar Convention; - UNESCO World Heritage Assets; - Thailand National Biodiversity Strategy; - WWF Wildfinder; - Bird Life International; and - IUCN Centres for Plant Diversity.

Definition of Protected Areas:
"A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values."
(IUCN Definition 2008)

Definition of High Biodiversity Value Areas:
Areas that play host to a diversity of species and provide habitats in a natural or semi natural form. These areas are usually important habitat for threatened species. Types of areas that are considered a High Biodiversity Value Area are as follows:
- Key Biodiversity Area (KBA)
- World Heritage Area
- Ramsar site
- Important Bird and Biodiversity Area (IBA)
- Alliance for Zero Extinction (AZE) Sites
- Endemic Bird Area (EBA)
- Tiger Conservation Landscape

For the purposes of protected area status, the IUCN Protected area classification has been used as shown in Table 1.2.

Table 1.2: Protected Area Classifications (IUCN 2008)

Return to EN11 - Protected Area/High Biodiversity Value Area Category

Category	Description
Category Ia	Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological and geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.
Category Ib	Category Ib protected areas will generally be larger and less strictly protected from human visitation than category Ia: although not usually subject to mass tourism they may be open to limited numbers of people prepared for self-reliant travel such as on foot or by boat, which is not always the case in Ia.
Category II	Category II protected areas usually combine ecosystem protection with recreation, subject to zoning, on a scale not suitable for category I.
Category III	Category III protected areas are generally centred on a particular natural feature, so that the primary focus of management is on maintaining this feature, whereas objectives of Ia are generally aimed at a whole ecosystem and ecosystem processes.
Category IV	Category IV protected areas protect fragments of ecosystems or habitats, which often require continual management intervention to maintain. Category Ia areas on the other hand should be largely self-sustaining and their objectives preclude such management activity or the rate of visitation common in category IV. Category IV protected areas are also often established to protect particular species or habitats rather than the specific ecological aims of category Ia.
Category V	Category V protected areas are generally cultural landscapes or seascapes that have been altered by humans over hundreds or even thousands of years and that rely on continuing intervention to maintain their qualities including biodiversity. Many category V protected areas contain permanent human settlements. All the above are incompatible with category Ia.
Category VI	Category VI protected areas contain natural areas where biodiversity conservation is linked with sustainable use of natural resources, which is incompatible with category Ia. However large category VI protected areas may contain category Ia areas within their boundaries as part of management zoning.

Approach
For EN11, the risk assessment is based on the proximity of the asset to protected areas and areas of high biodiversity value. Assets closer than 2 km are rated as a high risk; those between 2 km and within 5 km a medium risk; and those greater than 5km are recorded as a low risk.

These distances are appropriate for the purposes of this high level risk assessment given the requirement of the indicator to identify assets "in or adjacent to" protected areas or areas of high biodiversity value. EN12 provides a quantitative assessment of the likely impact on areas of high biodiversity value.

Table 1.3 provides the risk criteria used for assessing risk for EN11.

Return to EN11 - Risk Result

Table 1.3: Risk Criteria for Assessing Biodiversity Risk – EN11

Proximity to Protected Area	Risk Criteria
Insufficient data to assess the location of the asset in relation to protected areas or areas of high biodiversity value	Insufficient Data
Protected area or area of high biodiversity value is greater than 5 km from the asset.	Low
Protected area or area of high biodiversity value is greater than 2 km or less than 5 km of the asset.	Moderate
Protected area or area of high biodiversity value is immediately adjacent to or within 2 km of the asset.	High
Asset is located within the Protected area or area of high biodiversity value.	Very High

1.2) Biodiversity Indicator - EN12 (GRI Disclosure 304-2)

ดัชนีชี้วัดความหลากหลายทางชีวภาพ EN12

Return to EN12

Significant impacts of activities, products, and services on biodiversity

This indicator is triggered when EN11 has been identified as "High" or "Very High". THe indicator provides information on the significant direct and indirect impacts of PTT Group's assets on biodiversity in protected areas and areas of high biodiversity value outside protected areas. It also provides the background for understanding (and developing) a Biodiversity Action Plan to avoid and mitigate these impacts for assets where impacts are likely to occur on areas of high biodiversity value.

Table 1.4 outlines the measurement parameters used and the information sources for assessing PTT Group assets for indicator EN12.

Table 1.4: Measurement parameters and information sources for indicator EN12

Measurement	Information Source
Characterisation of impact: - Use of PTT Group assets; - Pollution from asset; - Introduction of invasive species, pests, and pathogens; - Reduction of species; - Habitat conversion; and - Changes in ecological processes outside the natural range of variation (e.g., salinity or changes in groundwater level). **Impact description:** - Species affected; - Extent of areas impacted; - Duration of impacts; - Reversibility or irreversibility of the impacts; and - Accident History.	- Characterisation of the potential types of significant impacts from asset types; - Information from PTT Group on threats (pollution, invasive species, habitat conversion, ecological processes) for each asset; - Readily available information from internet; and - ESIA undertaken for assets.

Approach

For EN12, the risk assessment approach is undertaken by characterising the potential impact on biodiversity values based on: whether an asset was likely to have a "significant impact" on biodiversity (from pollution, invasive species, habitat conversion, and change in ecological processes); whether the impact was likely to be permanent or temporary; the phase of the asset operation (construction, operation and/or closure); the distance to the protected area or area of high biodiversity value and whether control measures to avoid and mitigate against impacts were in place.

The definition of "significant impact" from the GRI reporting protocol (GRI, 2011) to assist in quantifying risk to biodiversity from the assets. The reporting protocol requires a characterisation of whether an asset is likely to have a "significant impact" on biodiversity based on the potential adverse effects of the asset on the ecological integrity of an area or region, either directly or indirectly. A significant impact is likely to occur when there is a change in ecological features, structures, and functions across an area and over the long term that in turn impact on the viability of habitats and species.

A significant impact may also occur when the ecosystem services provided to humans are severely altered or compromised as a result of the impacts form the asset.

Application of Risk Assessment Approach

Data should be entered into the Biodiversity Risk Assessment Calculator to determine the likely risk from the asset for EN12.

Table 1.5 outlines the risk assessment framework to be applied to determine the risk of the asset to biodiversity values for EN12.

An assessment should be undertaken for the current phase of the assets lifecycle.

Return to EN12 - Risk Result

Table 1.5: Risk Criteria for Assessing Biodiversity Risk – EN12

Risk Associated with Size and Type of Asset		Proximity to nearest Protected area or area of High Biodiversity Value (EN11 Results)			
		Insufficient Data	EN11 Low > 5 km	EN11 Moderate 2 - 5 km	EN11 High or Very High < 2km
Insufficient Data		Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data
Low	Characterization of impacts from the asset indicates that the risk of significant impact is low	Insufficient Data	Low	Low	Moderate
Moderate	Characterization of impacts from the asset indicates that the risk of significant impacts is moderate	Insufficient Data	Low	Moderate	High
High	Characterization of impacts from the asset indicates that the risk of significant impacts is high.	Insufficient Data	Moderate	High	Very High

Table 1.6: Matrix to Characterize Significant Impacts on Biodiversity Values

	Phase	Impact Type	Quantify	Duration	Reversibility/ irreversibility	Controls in Place	Accident History	Species Identified	Asset Risk Ranking	
Pollution	Construction Operation Closure	None Air Soil Water Noise Waste Visual	No Data None Small Medium Large	No Data None Short Medium Long Permanent	No Data Yes No	No Data Emergency Yes No	No Data None Small Medium Large	No Data None Low Moderate High Very High	Insufficient Data Low Moderate High Very High	Return to EN12 - Pollution
Pests and weeds introduced	Construction Operation Closure	None Invasive Native Species Pathogens Vertebrates Weeds Insects Parasites	No Data None Small Medium Large	No Data None Short Medium Long Permanent	No Data Yes No				Insufficient Data Low Moderate High Very High	Return to EN12 - Pests and weeds introduced
Habitat Impact (clearing of vegetation)	Construction Operation Closure	None Broad scale Clearing Linear Clearing Patch Clearing Plantation Establishment Slash and Burn Agriculture Modified Habitat	No Data None Small Medium Large	No Data None Short Medium Long Permanent	No Data Yes No				Insufficient Data Low Moderate High Very High	Return to EN12 - Habitat Clearing

		Modified Habitat							
Change in ecological process	Construction Operation Closure	None Salinity Groundwater Level Soil Contamination Vegetation Clearance Fire Forestry Agriculture	No Data None Small Medium Large	No Data None Short Medium Long Permanent	No Data Yes No				Insufficient Data Low Moderate High Very High

Return to EN12 - Changes in Ecological Process

Table 1.7: Quantification of Impact on Biodiversity Values

Impact Type	Quantification	Information Source	Threshold		
Pollution	Determine the volume and type (Air, water, noise, waste, visual) of discharge/impact to the environment from pollution during the current phase of the asset's lifecycle. The pollution most likely to affect species and habitats should be assessed in the matrix. Where more than one discharge/impact occurs, the discharge of the greatest likely impact to species and habitats should be assessed. For example, effluent/water discharges to the marine or freshwater environment that is habitat for IUCN red list species would be of greatest likely impact.	Relevant licences or permits from the asset. Discharge monitoring from the asset. Proximity of adjacent protected areas and areas of high biodiversity value. Proximity of IUCN red list species records.	No Data	There is insufficient data available to determine the pollution from the asset and the likely effect on biodiversity values.	Return to EN12 - Pollution
			None	No identified pollution from the asset	
			Small	Pollution is within acceptable environmental standards*	
			Medium	Pollution on occasion exceeds environmental standards*	
			Large	Pollution exceeding acceptable environmental standards* on a regular basis	
Pests and weeds introduced	Determine the distribution of the pests and weeds within and outside of the asset during the current phase of the asset's lifecycle. The pests or weeds introduced that are most likely to affect species and their habitats of concern should be assessed in the matrix. Where more than one pest or weeds are present, the pest or weed of greatest impact/distribution within and outside of the asset should be assessed. For example, weeds that have been introduced that have invaded a nearby protected area or area of high biodiversity value would be considered to be of greatest impact/distribution.	ESIA of the asset. Information from asset managers. Information from local or regional governments. Proximity of adjacent protected areas and areas of high biodiversity value. Proximity of IUCN red list species records.	No Data	There is insufficient data on the number of pests and weeds introduced and/or their distribution.	Return to EN12 - Pests and weeds introduced
			None	No pests or weeds introduced.	
			Small	Pests or weeds introduced are restricted in its distribution within the asset boundary.	
			Medium	Pests or weeds are distributed across all of the asset site area but within the boundary.	
			Large	Pests or weeds are distributed within and outside the boundary of the asset.	
Habitat impact (clearing of vegetation)	Determine the area and type of vegetation cleared during the current phase of the asset's lifecycle. This should relate only to habitat cleared for the asset during the PTT Group ownership. The clearing of habitat that is most likely to affect species and their habitats of concern should be assessed in the matrix. For example, clearing of habitat for critical or endangered IUCN red list species would be considered to be of most concern. Clearing that occurred prior to the procurement or establishment/construction of the asset by PTT Group should not be considered.	ESIA of the asset. Information from asset managers. Proximity of adjacent protected areas and areas of high biodiversity value. Proximity of IUCN red list species records.	No Data	There is insufficient data available on the clearing of habitat at the asset.	Return to EN12 - Habitat Clearing
			None	No clearing of habitat.	
			Small	Less than 1 ha of natural vegetation cleared	
			Medium	Greater than 1ha but less than 5ha of vegetation	
			Large	Greater than 5ha of vegetation cleared	
Change in ecological process	Determine the change in ecological process that has occurred during the current phase of the asset's lifecycle. The changes in ecological processes that are most likely to affect species and habitats should be assessed in the matrix. Where more than one change in ecological processes is determined, the change in ecological processes of greatest impact should be assessed. For example, changes to groundwater levels that impact an adjacent waterway or wetland habitat would be considered of concern. The assessment should relate to the boundary of the asset and the scale of the impact outside of the boundary at a district or regional scale.	ESIA of the asset. Information from asset managers. Proximity of adjacent protected areas and areas of high biodiversity value. Proximity of IUCN red list species records.	No Data	There is insufficient data on the likely change in ecological processes for the asset.	Return to EN12 - Changes in Ecological Process
			None	No changes in ecological processes	
			Small	Localized impact within the boundary of the asset	
			Medium	Impact outside the boundary of the asset	
			Large	Impact on a district/regional scale	

Note: "Environmental Standards" means regulatory standards required to limit impacts on human health and/or the environment.

Species Identified

The species identified refer to the species that are located within the asset boundary or within a protected area or area of high biodiversity value within 2 km of an asset. Where more than one species is identified, the highest IUCN category should be used in the matrix. Table 1.8 outlines the thresholds for the species identified.

Return to EN12 - Species Identified Risk Result

Table 1.8: Species Identified

IUCN Category	Thresholds
Critically Endangered	Very High
Endangered	High
Vulnerable	Moderate
Near Threatened	Low
Least concern	Low
No species of concern likely to be detected*	Low
No species of concern detected	None
Insufficient information is available to make an assessment	No Data

*Notes: *Determined by the proximity of the asset to habitats (protected areas and areas of high biodiversity value) indicating that no species are likely to be present; results from ecological studies and/or results from desktop searches using WWF Wildfinder and/or IBAT indicating that species are not likely to be present.*

Duration of Impact

Return to EN12 - Risk to Species

The duration of impact refers to the time that is expected for the impact to occur as it relates to the impact type. Table 1.9 outlines the thresholds for the duration of impact as used in the calculator.

Table 1.9: Duration of Impact

Duration	Thresholds
Permanent	Greater than 2 years
Long	Greater than 6 months but less than 2 years
Medium	Greater than 3 months but less than 6 months
Short	Greater than one week but less than 3 months
None	No impact detected
Insufficient information is available to make an assessment	No Data

Reversibility of Impact

Return to EN12 - Risk to Species

The reversibility of impact refers to the ability of the impact to be reversed during the lifecycle of the asset. For example, removal of habitats may be able to be re-established once the asset has been commissioned. Impacts of a permanent nature mean those that cannot be reversed once the asset has been decommissioned. Table 1.10 outlines the thresholds for the reversibility of impacts.

Table 1.10: Reversibility of Impact

Criteria	Thresholds
The likely impact on species and habitats is likely to be irreversible within the lifecycle of the asset.	No
The likely impact to species and/or habitats is likely to be reversible within the lifecycle of the asset.	Yes
Insufficient information is available to make an assessment.	No Data

Likely Impact on Species

Return to EN12 - Risk to Species

Likely impact on species refers to the probable relationship between the impact type (pollution, pests and weeds, habitat clearing and changes in ecological processes) with the species identified to reside within or near the asset.

An assessment should be undertaken in relation to the species lifecycle and a determination made as to whether there is likelihood that the pollution type would impact the species. For example, if water pollution has been identified as the primary impact type, a marine or aquatic species may be impacted by any discharges of polluted water from the asset. Similarly, clearing of habitat that contains habitat for a species identified would also be considered as an impact. Table 1.11 outlines the thresholds for the reversibility of impacts.

Table 1.11: Likely Impact on Primary Species

Criteria	Thresholds
An impact on a species is not likely during the species lifecycle based on the impact type (Refer to Table 2.8).	No
An impact on a species is likely during the species lifecycle based on the impact type (Refer to Table 2.8).	Yes
Insufficient information is available to make an assessment.	Uncertain

Controls in Place

Controls in place refer to the guidelines, standards and emergency procedures used on site to control threats and risks to biodiversity values. These may be standard operating procedures to limit or manage discharges to the environment, including pollution control equipment. Table 1.12 outlines the thresholds for controls in place to manage impacts on biodiversity values.

Table 1.12: Controls in Place

Criteria	Thresholds
No procedures in place to manage impacts on habitats or species.	No
Emergency procedures are in place to manage impacts on habitats or species.	Emergency Response
Procedures and management standards/guidelines are in place to manage impacts on habitats or species.	Yes
Insufficient information is available to make an assessment.	No data

Return to EN
Return to EN

Accident History

Accident history refers to the asset's historical accidental and emergency discharges to the environment that have caused impacts on biodiversity values. The thresholds relate to whether the accidents have been contained on site or whether greater environmental harm has occurred at a local or regional scale. Table 1.13 outlines the thresholds for accident history for the assets.

Table 1.13: Accident History

Criteria	Thresholds
One or more accidents that have not been contained within the asset site have caused harm to the environment and have ongoing environmental effects.	Large
One or more accidents that have not been contained on-asset and have caused harm to the environment since the establishment of the asset.	Medium
One or more accidents have occurred on the asset but these have been contained on-asset and have not impacted on the surrounding environment since the establishment of the asset.	Small
No history of accidents	None
Insufficient information is available to make an assessment.	No Data

Reutrn to EN

Table 1.14: Direct Driver of Biodiversity loss

	Phase	Impact Type
Climate change	Construction Operation Closure	None Greenhouse gas emissions
Pollution	Construction Operation Closure	None Soil Water Solid Non-GHG air pollution Disturbances
Invasive alien species introduction	Construction Operation Closure	None Invasive Native Species
Land and sea use change	Construction Operation Closure	None Land ecosystem use Freshwater ecosystem use Ocean ecosystem use
Exploitation of resurces	Construction Operation Closure	None Surface water Groundwater mineral extrcted other resource use

Return to EN12 - Climate change

Return to EN12 - Pollution

Return to EN12 - Invasive alien species introduction

Return to EN12 - Land and sea use change

Return to EN12 - Exploitation of resurces

1.3) Biodiversity Indicator EN13 (GRI Disclosure 304-3) Habitats protected or restored

Return to EN13

ดัชนีชี้วัดความหลากหลายทางชีวภาพ EN13

This indicator records the areas of habitat protected or restored by PTT Group. These areas may include voluntary or compulsory forest restoration requirements imposed by governments.

The programs may or may not be associated with particular assets. PTT Group or Corporate may have estbalished these programs to respond to biodiversity or social concerns.

Examples of these programs may include mangrove restoration programs or community forest activities. Reference should be made to relevant documentation on the program from PTT Group.

The information that is required to be recorded for each protection or restoration program includes the following:
a. Size and location of all habitat areas protected or restored, and whether the success of the restoration measure was or is approved by independent external professionals.

b. Whether partnerships exist with third parties to protect or restore habitat areas distinct from where the organization has overseen and implemented restoration or protection measures.
c. Status of each area based on its condition at the close of the reporting period.
d. Standards, methodologies, and assumptions used.

1.4) Biodiversity Indicator EN14 (GRI Disclosure 304-4) IUCN Red List species and national conservation list species with habitats in areas affected by operations

Return to EN14

ดัชนีชี้วัดความหลากหลายทางชีวภาพ EN14

This indicator applies to assets that have triggered EN11 or have had an Environmental Impact Assessment (EIA) completed for the project. The purpose of the indicator is to identify species based on their extinction risk that may be impacted by the project. This assessment is required to be completed through an EIA process in order to understand specific species related impact due to an assets activities. Reference should be made to the relevant EIA prpeared for the asset (if available).

The information that is required to be recorded for assets determined to have an impact on species includes:
1. Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk:

a. Critically Endangered
b. Endangered
c. Vulnerable
d. Near Threatened
e. Least Concern

The definition for each level of extinction risk is listed in the following link:
https://portals.iucn.org/library/sites/library/files/documents/RL-2001-001-2nd.pdf