

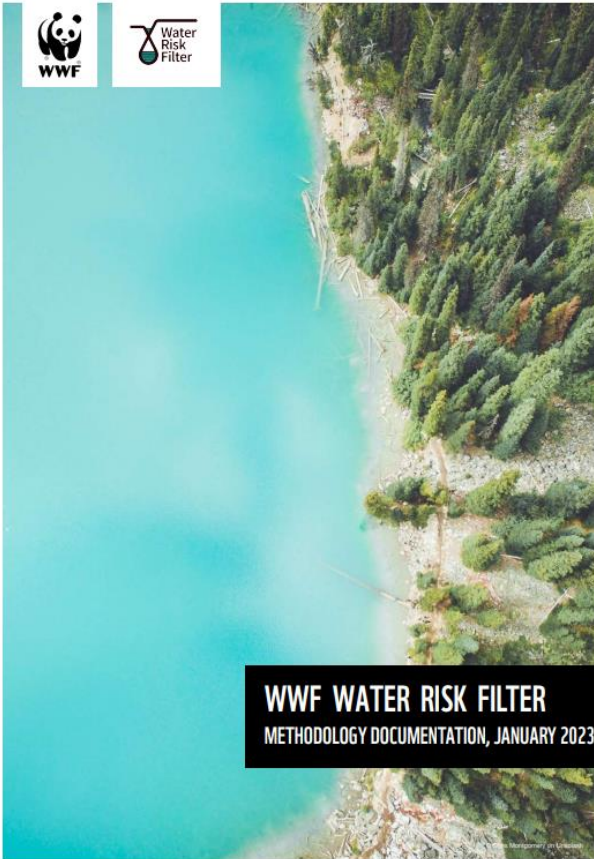
GPSC Exposure to Water Stressed Areas 2025



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Definition of water stress



WWF Water Risk Filter



S&P Global

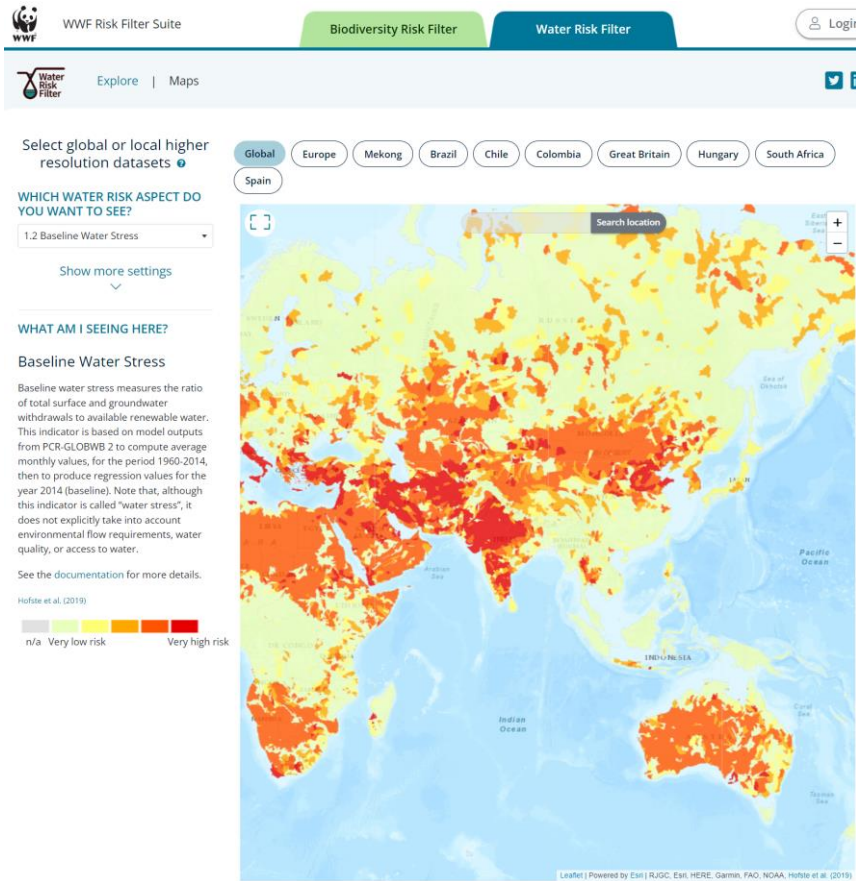
GPSC's exposure to water stress area is assessed using **WWF Water Risk Filter** which defines that the level of "**High risk (score 4) and Extremely High risk (score 5)**" are considered as "high water stress area". (see next page for more information)

The "High Risk" or "Extremely High Risk" areas, as mapped by WWF Water Risk Filter meaning that the area where are **indicated high competition among users to withdraw the water.**

- The water stress measures the ratio of total surface and groundwater withdrawals to available renewable water.
- The definition is **in line with S&P's water stress definition** which is when withdrawals are greater than 20% of total renewable resources, water stress often is a limiting factor on development; withdrawals of 40% or more represents high stress. Similarly, water stress may be a problem if a country or region has less than 1,700 m³ yr⁻¹ of water per capita.

Methodology

In the assessment: The software “**WWF Water Risk Filter**” is applied in order to analyze “high water stress area” for GPSC.



- The **WWF Water Risk Filter** (WRF) is a water risk assessment tool. Designed to be used as a corporate and portfolio-level screening tool, the WRF enables companies and investors to identify water risks facing their operations, value chains and investments both now and in the future.
- By assessing their water risks using the WRF tool, companies and investors will be able to identify what to prioritize and where it matters the most to mitigate their water risk. Furthermore, it will enable them to better account for water within their corporate strategies and investment decisions in order to build resilience for their businesses and investments, while in turn supporting the river basins in which their business operate and upon which their investments depend.



In the assessment: GPSC operation under “**High risk (score 4) and Extremely High risk (score 5)**” will be considered as “high water stress area”.

Scope

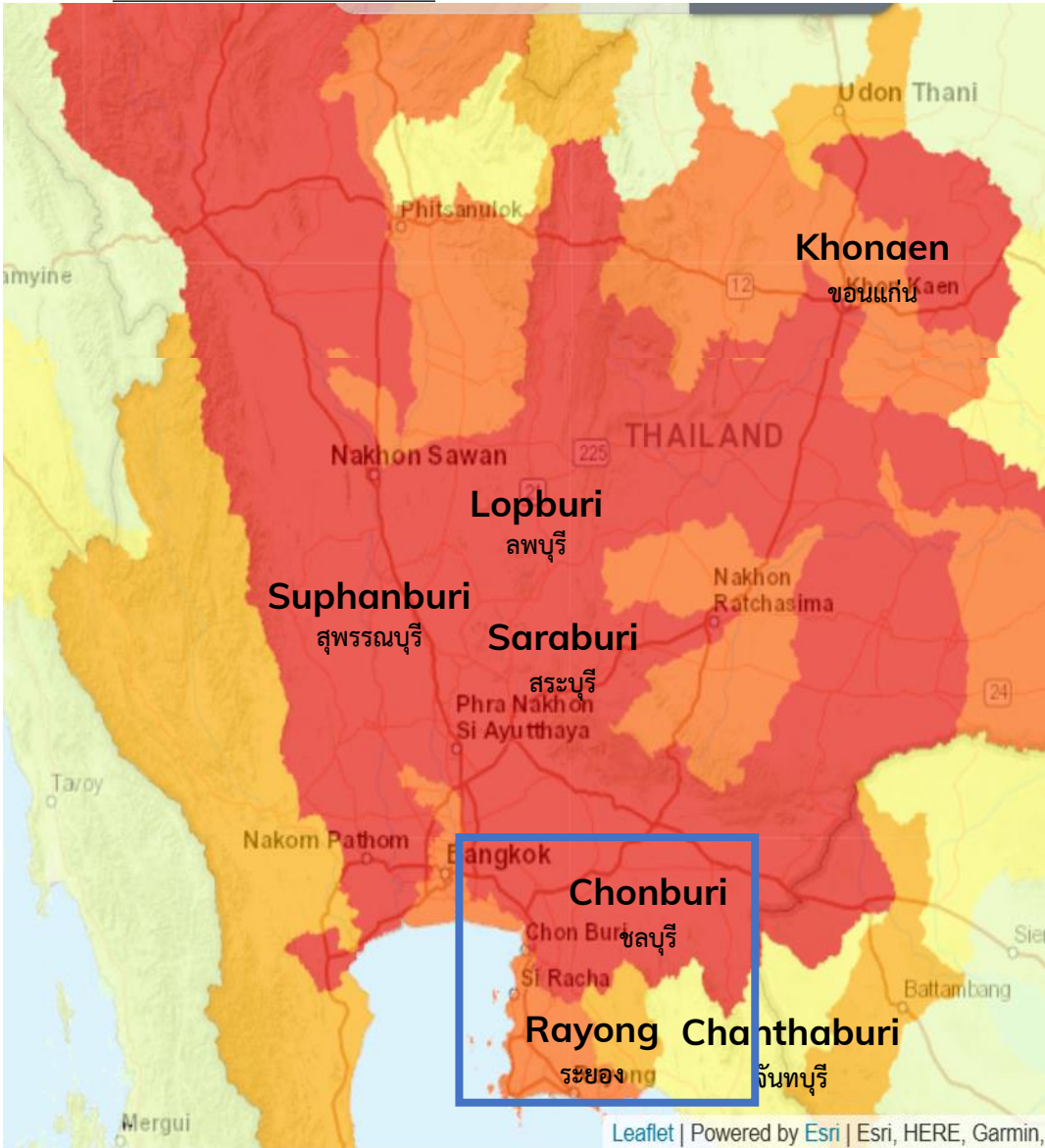
Assessment Boundary: GPSC conducts water-stress screening across its portfolio, covering both operational-control and non-operational-control sites in Thailand and overseas operations/investments.

Performance Reporting Boundary: For water-related performance reporting, GPSC applies the operational-control approach. Accordingly, non-operational-control sites are included in the broader portfolio-level water-stress screening but are excluded from the calculation of operational water performance indicators.

Location	Power Plant
Chonburi	- Sriracha Power Plant (SRC) - Glow IPP Power Plant (GIPP)
KhonKaen	- PPS 1 - PPS 2 - PPS 3
Pichit	- NPS 1 - WXA 1 - WXA 2 - WXA 3
Suphanburi	- NPS 2 - SSE
Lopburi	NPS3
Chanthaburi	Getz Energy Solar
Saraburi	Glow Energy Solar PV Rooftop Project 1
Ratchaburi	RPCL
Pathumthani	NNEG
Ayutthaya	- BIC-1 - BIC-2
Bangkok	Getz Energy

Location	Power Plant
Rayong	- Central Utility Plant 1 (CUP 1) - Central Utility Plant 2 (CUP 2) - Central Utility Plant 3 (CUP 3) - Central Utility Plant 4 (CUP 4) - GHECO-One Power Plant - Glow Energy Phase 1 - Glow Energy Phase 2 - Glow Energy Phase 4 - Glow Energy Phase 5 - Glow SPP 2/ Glow SPP 3 - Glow SPP 2 Replacement - Glow Energy CFB 3 - Glow SPP 11 Project 1 - Glow SPP 11 Project 2 - Glow SPP 11 Project 3 - IRPC-CP - Glow Energy Solar - Refuse-Derived Fuel Power Plant (RDF)
The North of Vientiane (Laos)	NL1PC
Atta pue (Laos)	Huay Ho
The South of Luang Prabang (Laos)	XPCL
India	GRSC (AEPL) (8 locations)
Taiwan	- GRP 1 (Shan Yang Energy) - CFXD (Offshore Wind Farm)

Results - GPSC Water Stress Mapping (Province-based)



GPSC applies the WWF Water Risk Filter to assess water-stress exposure across the portfolio defined in the assessment boundary.

For operational water performance, the assessment further focuses on sites within GPSC's operational-control reporting boundary. Among these sites, operational plants with material water consumption are primarily located in Rayong and Chonburi provinces and are further assessed to identify priority water-stressed locations.

Operational-control plants with material water consumption are primarily located in Rayong and Chonburi provinces.



Solar power plants are included in the portfolio-level water-stress screening but are not considered water-consuming operational sites, as they do not have material freshwater consumption associated with power generation operations..

Results - GPSC Water Stress Mapping (1/4)

Location	Water stress level*	GPSC Plant	Note
Suphanburi	Extremely High	NPS 2	Solar Power Plant (non-water consumed plant)
	Extremely High	SSE	Solar Power Plant (non-water consumed plant)
Lopburi	Extremely High	NPS 3	Solar Power Plant (non-water consumed plant)
Kanchanaburi	High	TSR	Solar Power Plant (non-water consumed plant)
Rayong	High	Central Utility Plant 1 (CUP 1) Central Utility Plant 2 (CUP 2) Central Utility Plant 3 (CUP 3) Central Utility Plant 4 (CUP 4)	Main operational power plants that consume water.
	High	IRPC Clean Power Company Limited (IRPC-CP)	
	High	GHECO-One Power Plant	
	High	Glow Energy Phase 1 Glow Energy Phase 2 Glow Energy Phase 4 Glow Energy Phase 5	
	High	Glow SPP 2/ Glow SPP 3 Glow SPP 2 Replacement	

* This assessment measures baseline water stress, which is the ratio of total water demand to currently available renewable surface and groundwater supplies. Higher values indicate more competition among users.

Results - GPSC Water Stress Mapping (2/4)

Location	Water stress level*	GPSC Plant	Note
Rayong	High	Glow Energy CFB 3	Main operational power plants that consume water. (except solar plants)
	High	Glow SPP 11 Project 1 & Project 3 Glow SPP 11 Project 2	
	High	Rayong Waste to Energy	Municipal Solid Waste
	High	Glow Energy Solar Glow Energy Solar PV Rooftop Project 2	Solar Power Plant (non-water consumed plant)
Chonburi	Extremely High	Sriracha Power Plant (SRC) Glow IPP	Main operational power plants that consume water. (except solar plants)
	Extremely High	Chonburi Clean Energy (CCE)	Industrial Waste plant
KhonKaen	High	PPS 1 PPS 2 PPS 3	Solar Power Plants (non-water consumed plant)
Bangkok	Medium	CHPP	
Pathumthani	High	NNEG NNEG Expansion	

* This assessment measures baseline water stress, which is the ratio of total water demand to currently available renewable surface and groundwater supplies. Higher values indicate more competition among users.

Results - GPSC Water Stress Mapping (3/4)

Location	Water stress level*	GPSC Plant	Note
Ayutthaya	Extremely High	BIC-1 BIC-2	
Atta pue (Laos)	Very low	Huay Ho	Hydro power plant
The North of Vientiane (Laos)	Very low	NL1PC	Run-of-River Hydropower Plant
The South of Luang Prabang (Laos)	Very low	XPCL	Run-of-River Hydropower Plant
Ratchaburi	Medium	RPCL	
Pichit	Medium	NPS 1 WXA 1 WXA 2 WXA 3	All are Solar Power Plant (non-water consumed plant)
Taiwan	Very low	GRP 1 (Shan Yang Energy)	Solar Power Plant (non-water consumed plant)
Chanthaburi	Low	CHPP Solar	Solar Power Plant (non-water consumed plant)
Sara Buri	Extremely High	Glow Energy Solar PV Rooftop (Phase 1)	Solar Power Plant (non-water consumed plant)

* This assessment measures baseline water stress, which is the ratio of total water demand to currently available renewable surface and groundwater supplies. Higher values indicate more competition among users.

Results - GPSC Water Stress Mapping (4/4)

Location	Water stress level*	GPSC Plant	Note
Taiwan	N/A	CFXD	Offshore Wind Farm No data available on WWF Water Risk Filter Tool
India (Gujarat)	Extremely High	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)
India (Maharashtra)	Extremely high	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)
India (Rajasthan)	Extremely high	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)
India (Karnataka)	Medium	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)
India (Uttar Pradesh)	Extremely high	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)
India (Haryana)	Extremely high	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)
India (Bihar)	Medium	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)
India (Tamil Nadu)	Extremely high	GRSC (AEPL)	Solar Power Plant (non-water consumed plant)

* This assessment measures baseline water stress, which is the ratio of total water demand to currently available renewable surface and groundwater supplies. Higher values indicate more competition among users.

Summary – Water Stress Assessment for Water-Consuming Operational-Control Sites

Based on the WWF Water Risk Filter assessment, GPSC has identified operational-control sites with material water consumption located in areas classified as high or very high water stress. Water-consuming operational sites in Rayong Province are classified as high water stress, while Sriracha Power Plant (SRC) and Glow IPP in Chonburi Province are classified as very high water stress. These sites are therefore prioritized for water-related risk monitoring and management, including the monitoring of freshwater consumption and water management performance.

Location	Water stress level*	GPSC Plant	Note
Rayong	High	Central Utility Plant 1 (CUP 1) Central Utility Plant 2 (CUP 2) Central Utility Plant 3 (CUP 3) Central Utility Plant 4 (CUP 4)	Note: Solar power plants are included in the portfolio-level water-stress screening but are excluded from this summary as they do not have material freshwater consumption associated with power generation operations.
	High	IRPC Clean Power Company Limited (IRPC-CP)	
	High	GHECO-One Power Plant	
	High	Glow Energy Phase 1 Glow Energy Phase 2 Glow Energy Phase 4 Glow Energy Phase 5	
	High	Glow SPP 2/ Glow SPP 3 Glow SPP 2 Replacement	
	High	Glow Energy CFB 3	
	High	Glow SPP 11 Project 1 & Project 3 Glow SPP 11 Project 2	
Chonburi	Extremely high	Sriracha Power Plant (SRC) Glow IPP	

Corresponding water management measures are implemented to strengthen water-use efficiency, water availability monitoring, drought preparedness, and operational resilience at priority sites.

Thank you

