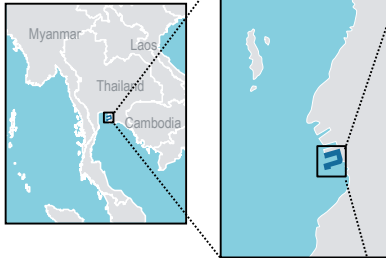


Laem Chabang Port Phase 3 – Project Scope

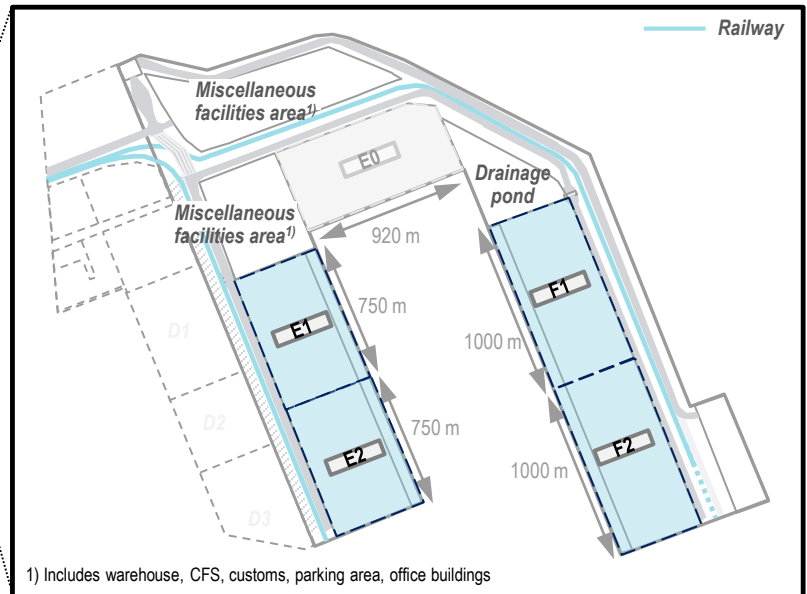
Location



- > **Distance (road) from Bangkok:** ~130 km
- > **Time (by road):** ~2 hours
- > **Coordinates:** 13.1041° N, 100.9158° E

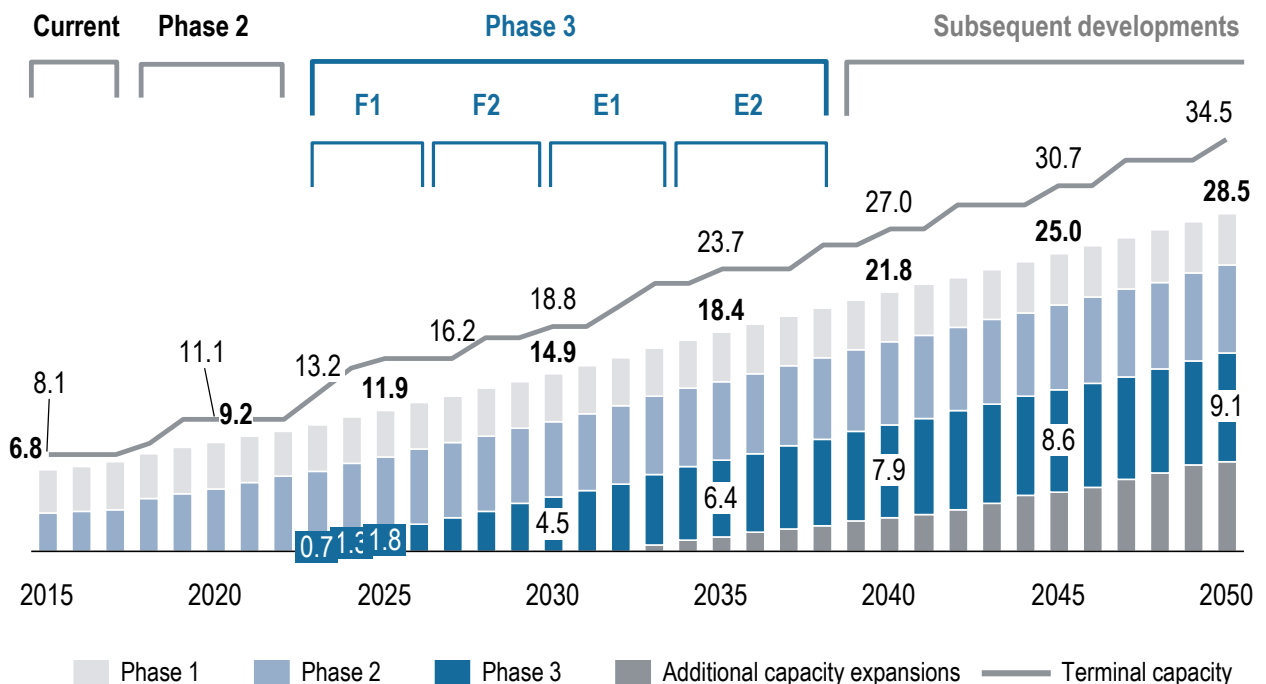
Specifications

- > **Total berth length:** 4,420 m
- > **Depth:** -18.5 meters (MSL)
- > **Total area:** ~1,600 rai / ~2.6 sq. km
- > **Terminals:**
 - 1 Domestic coastal container terminal with up to 1 m TEU capacity / year
 - 4 International container terminals with combined 7 m TEU capacity / year
 - 1 Multipurpose / Ro-Ro terminal with up to 1 m vehicles / year



- > **Maximum ship dimension:** Post New Panamax
- > **Transportation Network:**
 - Seamless in-port rail & road connectivity
- > **Port services:**
 - Port automation & electronic port control system
- > **Concession boundary:**
 - F and E container series will be separated (each with 30-50 years concession period)
 - E0 may be excluded from concession – to be determined after the results of Market Sounding 2

Laem Chabang Port and Phase 3 – Future Capacities










1) Productivity improvement from 2,130 TEU per berth meter in 2015 to 2,900 TEU per berth meter in 2050

Laem Chabang Port Phase 3 – CAPEX Technologies

CAPEX obligations

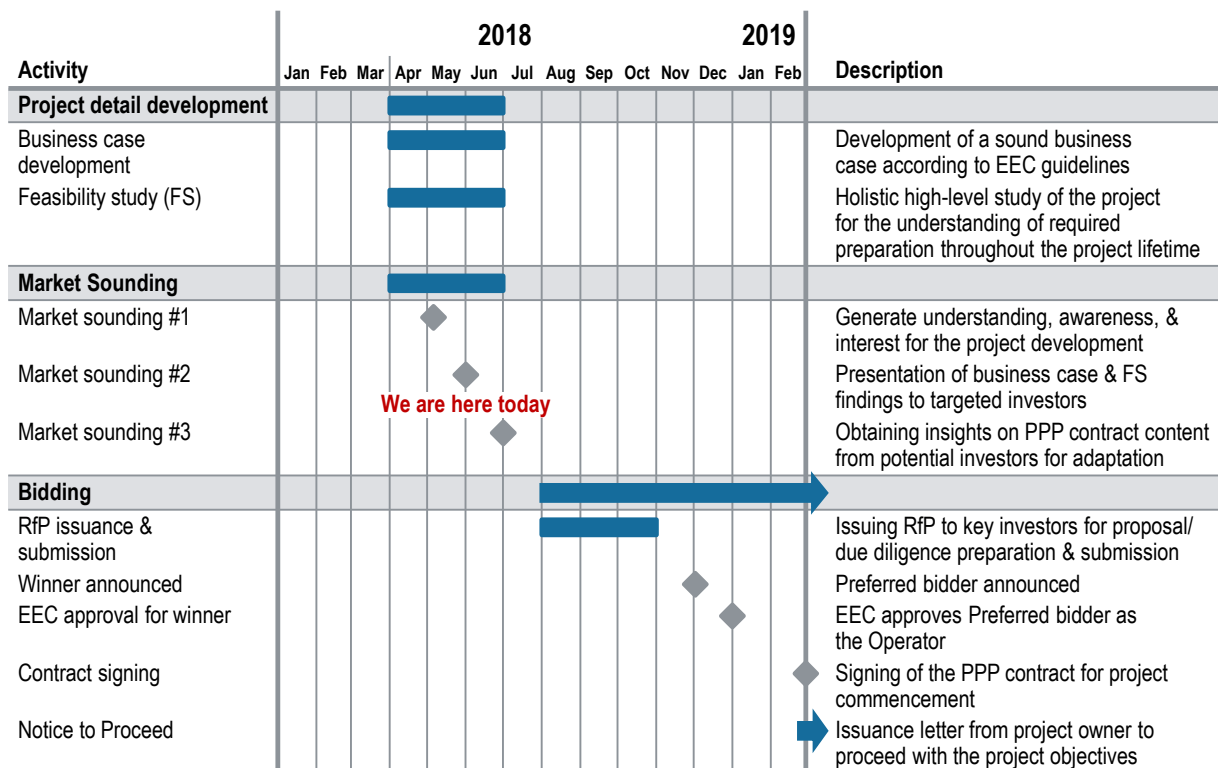
Basic infra	<ul style="list-style-type: none"> > Land > Capital dredging > Port entrance > Breakwaters, shore protection > Roads for port access > Rail connection to the port 	PAT	
	Operations infra	<ul style="list-style-type: none"> > Berth underwater structures > Specific mooring buoys > VTMS > Access roads > Intra-port rail infrastructure > Marine fenders > Paving, surfacing > Apron & stacking areas > Terminal lighting > Terminal yard, inc. rail > Revetments and slopes > Quay walls > Offices > Repair shops > Other buildings for operations 	PAT
		Ops	
Equipment	<ul style="list-style-type: none"> > Power supply systems > Terminal operating system > All terminal equipment > Reefer systems > Gate 	PAT	
	Ops		

Key equipment for terminal operator capex

Icon	Equipment	Estimated quantity
	State of the art quay cranes	32 quay cranes
	State of the art yard cranes	175 yard cranes
	Terminal tractors + trailers	102 prime movers + 102 trailers
	Transtainer	17 transtainers
	Trucking gates	20 truck gates
	Wagon loading capacity & rail connectivity	20 truck gates
	State of the art Terminal Operating System (TOS)	

Note: Figures above are preliminary and operator(s) may propose alternative equipment configurations that achieves similar or superior capacity and / or performance

Laem Chabang Port Phase 3 – Overall Timeline



Laem Chabang Port Phase 3 – Automatic Benefits of Private Operator

Benefits from PPP

- > Co-investment government support from PAT in the form of design, build, finance, and maintain of LCP3 public infrastructure (details of specific assets will be provided in the later stage)
- > Rights to access and utilize state-owned land (acquired, expropriated, or reclaimed) over the concession period
- > Rights to access and utilize state-owned infrastructure and public facility within the scope of LCP3
- > Rights to construct, operate, and collect revenue subjected to standard tariffs set by PAT for port operation business for the terminals in concession within Laem Chabang Port Phase 3

+Benefits from EEC Act B.E. 2561+Benefits from BOI (Basic)

- > Rights of land and condominium ownership for commercial or residential purpose (s. 48)
- > Rights of land or real estate lease for 50 years plus one-time renewal of no more than 49 years (s. 52)
- > Rights of foreign skilled labor, specialist, management and their spouses, children, ascendants and dependents of visa issued by EEC Secretary General (s. 54)
- > Rights of foreign skilled labor, specialist, and management to work subjected to written approval from EEC Secretary General (s. 55)
- > Rights of tax or duties exemption or reduction for business in EEC, subject to the limits under the investment promotion law (s. 56)
- > Rights of exemption from whole or part of the Customs law (s. 57)
- > Rights of exemption from whole or part of Exchange Control Act and eligibility to use foreign currency for payment (s. 58)
- > Rights of licensed foreign professionals to practice in the EEC, subjected to EEC Policy committee conditions (s. 59 (1))
- > Rights of other investment promotion law (s. 59 (2))

- > Rights of BOI investment promotion incentive, subjected to approval of BOI Certification; which grant the private party of the following basic incentives¹⁾:
 - Exemption or reduction of import duty on machinery
 - Reduction of import duties (up to 90%) for raw materials used in production
 - Exemption of corporate income tax (CIT) on profit and on dividend for up to 5 years
 - 50% reduction of personal income tax (PIT) for up to 5 years after the period of CIT exemption
 - Ability to deduct 200% of transportation cost, electricity cost, and water cost
 - Ability to record additional of 25% cost in installation or construction of necessary facility
 - Exemption of import duty for material for export production
 - Entering permit for alien to study investment opportunity
 - Work permit for skilled worker
 - Permit for land ownership
 - Permit to take out or remit foreign currency

Benefits from PPP and EEC Act are eligible to winning bidder right away

1) List of basic incentives are eligible for A3 category particularly business type 7.1.4 "Loading/unloading facilities for cargo ship"
Source: PAT, EEC Act B.E. 2561, BOI investment guideline 2018, Roland Berger

Laem Chabang Port Phase 3 – Applicable Board of Investment Incentives

Timeline

- Finalization of PPP contract and benefits for private party by end of Feb 2019
- Submission deadline by Dec 30, 2019
- Within 10 days after application submission
- Within 90 days after complete document submission by applicant
- Within 7 days after endorsement of approval decision
- Within 1 month after receiving approval decision letter
- Within 6 months after submission of acknowledgement
- Within 10 working days after the submission of certification request form

Actions required from private party

- > Study BOI incentive eligibility criteria and qualification of the project to obtain the incentive
- > Collect or download the application form
- > Fill the application and submit the application for investment support through either channels:
 - Online at e-Investment Promotion
 - Hardcopy application at BOI office
- > Arrange project presentation meeting with BOI official responsible for the project
- > Present and clarify project details to BOI official responsible for incentive approval
- > Submit all required documents to BOI
- > Acknowledge the approval decision through online form in e-Investment platform or by submitting acknowledgement form (F GA CT 07)
- > Fill and submit BOI certification form on e-Investment or on F GA CT 08 form to issue the certification

Responsible dept. and actions by BOI

- > BOI center
- > BOI website (www.boi.go.th)
- > One start one stop investment center (with support from PAT and EEC)
- > BOI website (www.boi.go.th)
- > BOI Office (with support from PAT and EEC)
- > Investment management division 1-5
- > Preliminary approval or disapproval from BOI committee and sub-committee
- > Official announcement of incentive approval decision by BOI
- > Secretary general office to issue the BOI certification for the applicant

Maximum 11 months after the submission of BOI incentive application to the issuance of BOI certification and assuming 1 month of application preparation, private party can receive BOI certification by Feb 2020

Laem Chabang Port Phase 3 – Project readiness

	Context of the risk	Risk mitigation and allocation
1	Related projects risk	
	<ul style="list-style-type: none"> > Delay in completion or misaligned capacity/ design/ functionality of related project e.g., doubled-track train connecting 3 ports, nationwide doubled-track railway, ICD 2 development 	<ul style="list-style-type: none"> > The government, EECO and all related agencies shall synchronize overall national railway master plan to ensure the policy to increase the number of shipment via rail transportation up to 30% of the total expected cargo volume through LCP port is in line with the completion and operational performance of LCP P3 > PAT, as public-sector entity, shall bear the risk of related projects given its ability to influence and align the development of related public-owned projects
2	Land risk	
	<ul style="list-style-type: none"> > Difficulty of land reclamation (e.g., ownership of land and rights of utilization) and land expropriation from local people (e.g., length of negotiation and amount of compensation, ability to enforce laws and regulation) 	<ul style="list-style-type: none"> > Relocation and compensation program will be put in place by PAT to reduce the risk of land acquisition obstacle and ensure minimal conflict in accordance with EIA/ EHIA approval > PAT shall bear the risk of land readiness given its responsibility of land acquisition under the PPP model and its ability to exercise the rights of expropriation
3	Transportation and utility risk	
	<ul style="list-style-type: none"> > Transportation risk may be due to an increased demand for rail and road transportation leading to an traffic congestion and excess travel time & transportation cost for LCP > Utility risk may be due to electricity outage, water supply shortage and insufficient solid waste management capacity from local government, incapacitation of wastewater treatment system, drainage system and retention pond water becoming wasted 	<ul style="list-style-type: none"> > Related transportation and utility projects are under close monitoring by PAT, EECO, and the government to ensure good synchronization of completion timeline and operational performance with room for redundancy > PAT, as a public-sector entity, shall bear the risk of transportation and utility given its ability to closely communicate and align with other public agencies
4	Law, rules, and orders risk	
	<ul style="list-style-type: none"> > This risk entails potential obstacles which may occur due to change in laws, rules, and order that can hinder or obstruct the project development completely e.g., <ul style="list-style-type: none"> – Stricter rules on foreign business allowance – Obtaining and/or sustaining the permit throughout the project timeline e.g., EIA/ EHIA, building permit, etc. 	<ul style="list-style-type: none"> > Detailed legal feasibility study and the power of EEC Policy committee to adjust obstructing laws can significantly mitigate such risk > Risk allocation is dependent on responsible party of the activity legal obstacle arises <ul style="list-style-type: none"> – PAT, as a public-sector entity, shall bear the risk in relation to law change; unless it can be proven that PAT has no authority or influence over such change in law – PAT shall bear the risk for permit approval for activity under its responsibility; Vice versa is true for activity under Private party responsibility
5	Risk from public hearing with affected public & community	
	<ul style="list-style-type: none"> > Potential impact on existing fisheries and aquaculture area in proximity of the construction site due to construction and operation of LCP P3 leading to strong public disapproval of the project 	<ul style="list-style-type: none"> > Relocation and compensation program will be put in place by PAT to reduce the potential disapproval of affected community from the construction and operation of LCP P3 > PAT shall bear the risk only to the scope of its construction responsibility > Private party shall bear the risk of impacts to public and community from the construction and operation under its responsibility given its commitment to laws and regulation as well as compliance to EHIA approval

Laem Chabang Port Phase 3 – Project feasibility [1/2]

	Context of the risk	Risk mitigation and allocation
1	Commercial risk	
	<ul style="list-style-type: none"> > The risk includes market demand, intra-port, inter-port, construction delay, and sub-optimal risks, particularly: <ul style="list-style-type: none"> – Market demand not meeting the forecasted 28.5 m TEU by 2050 resulting in lower utilization of Phase 3 terminals – Inability for Phase 3 terminal to compete with Phase 1 and Phase 2 terminals in discounting ability 	<ul style="list-style-type: none"> > Market demand expectation has been developed by expert taken into account global evolvement of port industry; results has been aligned with potential bidders in market sounding > Allocation of risk depends on which party has more control/expertise over the cause of such risk: <ul style="list-style-type: none"> – Private party shall bear market demand risk, intra-port competition risk, inter-port competition risk (for non-state owned ports), delay in construction of superstructure risk – PAT shall bear inter-port competition (for state-owned), delayed in infrastructure completion, and sub-optimal service from complementing projects

Laem Chabang Port Phase 3 – Project feasibility [2/2]

Context of the risk

Risk mitigation and allocation

<p>2 Technical risk</p>	<ul style="list-style-type: none"> > The risk includes inter-connectivity & inter-operability of design risk namely the intermodal operability of systems e.g.,: <ul style="list-style-type: none"> – Mismatch of constructed infrastructure e.g., rail / road design resulting in overlap investments and fixation – Inhomogeneous development of Phase 1 & Phase 2 rail & road to Phase 3 and outside LCP rendering it inoperable 	<ul style="list-style-type: none"> > On-going alignment with relevant agencies are in place to reduce the potential of technical risk materialization > Inter-connectivity and inter-operability of design risk shall be allocated to both PAT and the private party depending on the scope of such misalignment in connectivity or operation <ul style="list-style-type: none"> – Misalignment of infrastructure design shall be in PAT responsibility – Misalignment of superstructure design shall be in Private's responsibility
<p>3 Technological risk</p>	<ul style="list-style-type: none"> > The risk entails safety, technological obsolescence, and higher cost of operation & maintenance risks e.g.,: <ul style="list-style-type: none"> – Lack of capability to fully benefit from automation – Fast-paced technological development accelerating depreciation of technologies applied – Technology procured bound to one vendor due to lack of spare parts / knowledge / capability to repair 	<ul style="list-style-type: none"> > Private party shall propose modern state-of-the-art equipment based on proposal submission date as well as revision prior to superstructure development to be approved by PAT to mitigate the risk > Private shall undertake all technological risks given their responsibility in selecting/ implementing/ and operating the technologies in the port as well as its expertise and experience with automation systems in other ports under their operations
<p>4 Environmental risk</p>	<ul style="list-style-type: none"> > Impact on Public Health, Occupational Health and Safety during construction and during operation > Impact on Water Quality, Marine Ecology, Transportation & Fisheries and Aquaculture during construction 	<ul style="list-style-type: none"> > Protective, mitigation, and correction measures will be put in place by PAT to reduce the potential of environmental risk materialization throughout project lifecycle > Private party shall bear the environmental risk from the construction and operation under its responsibility given its commitment to laws and regulation as well as compliance to EHIA approval
<p>5 Legal risk</p>	<ul style="list-style-type: none"> > The risk encompasses potential risk from change in port industry laws, rules, regulations, or orders that, if materializes, can be detrimental to the success of the project e.g., <ul style="list-style-type: none"> – Change in tariff – Stricter monitoring and compliance 	<ul style="list-style-type: none"> > LCP P3 is one of the key driving projects for EEC development; thus close on-going alignment from high level government shall mitigate this risk > PAT, as the authority in charge of port industry regulations including standard tariff setting, shall bear this risk; unless it can be proven that change in law is available to the public at contract signing which transfer the risk to private party
<p>6 Financing risk</p>	<ul style="list-style-type: none"> > The risk entails <ul style="list-style-type: none"> – Unavailability for part / whole of financing required to fulfill allocated PPP responsibility – Investment costs overrun which are caused by: <ul style="list-style-type: none"> - Design error - Change of scope - Ambiguous contractual agreement and contractual interpretation 	<ul style="list-style-type: none"> > Early capital securing and identification of several possible sources of capital can mitigate the risk > Risk allocation is dependent on responsible party of the activity financing risk arise <ul style="list-style-type: none"> – PAT is responsible for financing risk of public infrastructure – Private party is responsible for financing risk of other infrastructure and superstructure of the port
<p>7 Economic risk</p>	<ul style="list-style-type: none"> > The risk entails unforeseen change in the country's economy / macroeconomics, trade balance, and rise in labor costs hindering manufacturing competitiveness e.g., <ul style="list-style-type: none"> – Increasing minimum wage to over THB 300 / day – Disruption in trade pattern due to change in industrial focus e.g., traditional automotive to next generation automotive 	<ul style="list-style-type: none"> > LCP P3 is one of the key driving projects for EEC development; thus close on-going alignment from high level government shall mitigate this risk > Allocation of this risk is based on the condition whether such change in policies can be known to the private party at the contract signing date <ul style="list-style-type: none"> – If the potential change has been made public prior to contract signing, private party shall bear the risk; otherwise, PAT shall bear the risk
<p>8 Political risk</p>	<ul style="list-style-type: none"> > The risk includes potential risk due to change in political environment particularly on: <ul style="list-style-type: none"> – Loss of government support – Change in national policies / development priorities – Change in government and risk of political event 	<ul style="list-style-type: none"> > LCP P3 is one of the key driving projects for EEC development; thus close on-going alignment from high level government shall mitigate this risk > PAT, as a public-sector entity, is in a better position comparing to the private party to influence and control the change of government support; hence it is more suitable to bear this risk <ul style="list-style-type: none"> – However, risk which is not influenceable by PAT will be covered under force majeure clause in the PPP contract, which covers both natural and political force majeure events

Laem Chabang Port Phase 3 – Readiness of PAT

Risk item allocated PAT's readiness and preparation to bear the risk

Readiness risk	Law, rules, and orders risk	<ul style="list-style-type: none"> > PAT and Laem Chabang Port Phase 3 working team constantly and closely monitor project development progress – Regular meetings are agreed to ensure any potential legal obstacle can be resolved early or escalated to the EEC Policy committee for approval or law amendment in time for project development milestones
	Commercial risk	<ul style="list-style-type: none"> > Ensure unique proposition for large state-owned ports (Map Ta Phut and Bangkok port) with development master plan > On-going alignment meetings with relevant public agencies (SRT, DRR, PEA, PWA, CAT) lead by PAT to ensure milestones achievement from each agency
Feasibility risk	Technical risk	<ul style="list-style-type: none"> > Finalize draft technical layout by end of June 2019 to communicate and align with related projects and agencies > Detailed technical layout will be presented in Market Sounding #3 to ensure design alignment with potential bidders
	Legal risk	<ul style="list-style-type: none"> > No foreseeable standard tariff reduction envisioned by PAT's current Board of Director
	Financing risk	<ul style="list-style-type: none"> > Identify multiple sources of capital (PAT's budget, bond issuance, infrastructure fund, public debt) > Potential to include penalty clause in case of late delivery of port infrastructure in the PPP contract (subject to negotiation)
	Economic risk	<ul style="list-style-type: none"> > Inclusion of foreseeable economic change or potential change as "Disclosed information" attached to PPP contract to clearly draw the scope of responsibility under economic risk
	Political risk	<ul style="list-style-type: none"> > Layout capital acquisition plan until the completion of port public infrastructure and secure budget approval within the current government > Minimize contingent budget requirement to reduce the dependency of budget availability to political situation in Thailand

The allocation of risk entails both the allocation of damages incurred from adverse occurrence as well as allocation of benefits incurred from beneficial occurrence; detailed allocation shall be stated in the PPP contract