

付録



## 付録 1.1: 道路 NSP サマリー(2021 年 5 月時点)<sup>1</sup>

### 1) 背景

#### (1) 概要

- 道路インフラシステムは、高速道路(1,163km)、国道(24,321km)、省道(29,993km)で構成されており、建設中の高速道路は 916km である。ベトナムの道路は、ASEAN 道路システム 4,252km、アジア道路システム 2,694km、GMS 道路システム 871km など、国際的なシステムにもつながっている。

表: 道路インベントリ

地域	高速道路(km)	国道(km)	省道(km)
Northern Midlands and Mountain	392	7,256	10,406
Red River Delta	468	2,133	3,967
North and South Central Coasts	193	8,366	6,197
Central Highlands	19	3,059	1,683
Southeast	51	855	2,885
Mekong Delta	40	2,652	4,856
Total	1,163	24,321	29,993

#### (2) 問題点

- 道路インフラは、発展に応じて品質を向上させてきたが、社会や国の発展に必要な交通量を満たしているとは言えない。都市部、郊外、工業開発区(主に港湾付近)における容量制限は、新たな問題であり、長期的な課題となっている。2010 年から 2019 年にかけて、旅客輸送距離の伸び率は 9.98%、貨物輸送距離の伸び率は 10.17%に達している。自動車やバイクの数が増え続ければ、道路システムは良いサービスを提供することができなくなる。さらに、道路投資管理の問題も解決しなければならない。

### 2) 道路計画

#### (1) 計画ビジョン

- 道路インフラは、他のモード、国際ゲートウェイ(アジア道路ネットワーク)、都市交通システム、特に大都市におけるものとの効果的な接続を提供するために、統合的に開発される。現代の科学技術、交通事故の削減、SEA(環境保護と気候変動への適応)に重点を置くべきである。2030 年、2050 年へのビジョンは以下まとめる。

- (2030 年まで)経済・政治の中心地、主要経済地域、海港、国際ゲートウェイ空港に接続するため、高速道路網の長さを 2023 年までに 2,079km、2025 年までに 3,021km、2030 年までに 5,165km とし、国道については段階的に整備する。

- (2030 年まで)道路舗装の改善、交通安全システムの強化、ミッシングリンクの解消、橋梁や拡幅などのイ



図: ベトナム交通ネットワーク

<sup>1</sup> TDSI の提供資料により調査団がまとめた内容である。

インフラの改修を行う。

- (2050 年まで) 交通手段間の円滑な接続と発展を伴う  
近代的な方法を提供し、利便性、安全性とリーズナブル  
なコストを確保する。

表: 2023 年まで高速道路優先案件

No	地域	区間	距離 (km)		コスト (VND bil.)	必要資金 2021-2025	
			完成	実施 中		SB	Non-SB
1	North - South Corridor	Bac Giang-Lang Son	64				
2		Hanoi - Bac Giang	46				
3		Ring Road 3	14				
4		Phap Van - Cau Gie	30				
5		Cau Gie - Ninh Binh	50				
6		La Son - Tuy Loan	66				
7		Da Nang - Quang Ngai	127				
8		Ho Chi Minh - Long Thanh - Dau Giay	21				
9		Ho Chi Minh - Trung Luong	40				
10		Eastern North – South, Phase 1*		654	89,722	78,461	11,261
11	Ben Luc - Long Thanh		58	31,320	31,320		
12	Trung Luong - My Thuan**		51	12,668	2,186	10,482	
13	My Thuan - Can Tho		23	4,826	4,826		
14	North	Thang Long Avenue	30				
15		Hanoi - Hai Phong	105				
16		Noi Bai - Nhat Tan	21				
17		Noi Bai - Lao Cai	264				
18		Hanoi - Thai Nguyen	66				
19		Ha Long - Van Don	60				
20		Quang Ninh - Hai Phong	25				
21		Thai Nguyen – Cho Moi	40				
22		Hoa Lac - Hoa Binh	26				
23		Ring Road section: Phu Dong - South Thang Long	19				
24	Van Don**	10		1,400	1,400		
25	Van Don - Mong Cai**	80		12,771	4,148	8,623	
26	Tuyen Quang - Phu Tho**	40		2,650	2,650		
27	Southern	Da Lat - Lien Khuong	19				
28		Ho Chi Minh - Long Thanh - Dau Giay	30				
Subtotal			1,163	916		84,936	27,488
Grand Total				2,079			112,423

Notes: (\*) Nationally important projects, (\*\*) Provinces as main agencies.

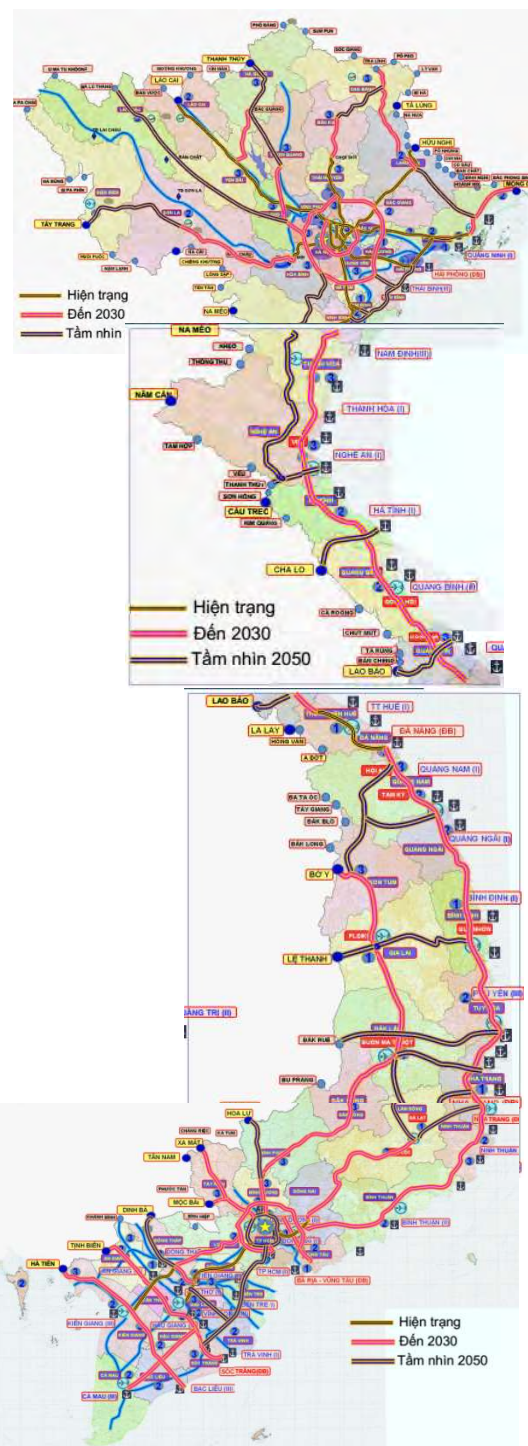


図: 高速道路計画ネットワーク

## (2) コリドー

4. 高速道路・国道の整備計画の方向性は、主要幹線と二次幹線に分類される。コリドーは(a)南北軸、(b)北部地域、(c)セントラルコースト地域、(d)セントラルハイランド地域、(e)南部地域で、合計 173 路線、約 29,771km である。

## (3) 道路需要

5. 2030 年の交通需要は、貨物量が 27 億 6400 万トン、旅客量が 94 億 3000 万人と推定され

る。交通量-距離では、国内貨物が 1,630 億トン・キロ、国内旅客が 2,970 億人・キロを記録する。また、2030 年には自動車数が約 800 万～1000 万台になると予想され、その内訳は自動車が 57%、乗用車が 14%、トラックが 29%となっている。

### 3) 優先案件

#### (1) 2023年まで高速道路

6. 現在の 1,163km に加えて、2023 年までに 916km が開通される予定である。

#### (2) 2025年まで高速道路

7. 2025 年までに、高速道路網は 3,021km(2023 年までに 2,079km、2025 年までに 942km を含む)となる。

表: 2025 年高速道路優先案件

No.	地域	区間	距離 (km)		コスト (VND bil.)	必要資金 2021-2025		資金 源
			完成	引き 続き		SB	Non-SB	
1	North - South	Eastern North - South Expressway: remaining sections *	375	387	152,837	36,296	28,994	PPP/S B
2	North	Cho Moi - Bac Kan	31		2,243	2,019		SB
3		Hanoi RR4 *		98	31,210	7,646	7,959	PPP
4		Connecting Ha Giang with NB- LC		81	7,800	5,460		ODA
5		Hoa Binh - Moc Chau **		83	21,577	2,913	3,560	PPP
6		Dong Dang - Tra Linh **		75	12,546	1,844	1,920	PPP
7	Central	Hoa Lien - Tuy Loan	12		2,100	1,890		SB
8	Coasts and	Dau Giay - Tan Phu	60		6,900	1,170	5,040	PPP
9	Central	Tan Phu - Bao Loc **	67		18,797	8,289	8,628	PPP
10	Highlands	Buon Ma Thuot - Van Phong		105	22,583	1,788		PPP
11	Southern	Bien Hoa - Vung Tau	54		18,805	6,030	10,895	PPP
12		Chon Thanh - Duc Hoa	84		6,800	4,760		SB
		HCMC RR3						
		+ Tan Van - Nhon Trach, TP1B		9	8064	4,804	2,453	PPP
		+ Tan Van - Nhon Trach, TP2A+2B *		17	15,754	11,285	2,894	PPP
		+ Binh Chuan - Highway 22 *		19	14,980	7,627	5,855	PPP
		+ Highway 22 - Ben Luc *		29	17,081	7,533	7,840	PPP
14		HCMC - Chon Thanh **		55	21,200	6,975	7,865	PPP
15		HCMC - Moc Bai **		65	13,600	4,665	4,855	PPP
16		Chau Doc - Can Tho *		116	24,100	4,283		PPP
17		Soc Trang - Tran De		37	7,477	958		PPP
18	Mekong Delta	My An - Cao Lanh	26		4,524	3,407		ODA
19		An Huu - Cao Lanh	30		5,998	2,351	2,447	PPP
20		Cao Lanh - Lo Te	29		2,050	287	1,312	PPP
21		Lo Te - Rach Soi	51		2,200	308	1,408	PPP
Subtotal			871***	1,176		134,587	103,925	
Grand total							238,925	

Notes: (\*) Nationally important projects, (\*\*) Implemented by provinces, (\*\*\*) Including Huu Nghi - Lang Son 43 km, HCMC RR3: Tan Van - Nhon Trach 1A 9 km

#### (3) 2030年まで高速道路

8. 2030 年までには、ベトナムの高速道路は約 5,165km(2025 年までに完成する 3,021km、2021 年～2025 年のプロジェクトとして 2025 年以降に繰り越される 1,068km、2026 年～2030 年に完成する 1,076km を含む)になる。

表: 2030 年高速道路優先案件

No.	地域	区間	距離 (km)	コスト (VND bil.)	資金源
1	North	Moc Chau - Son La	105	8,360	State budget
2		Phu Tho - Cho Ben	58	9,860	State budget
3		Hanoi RR5 *, **	200	36,000	PPP
4	Central Coasts and Central Highlands	Vinh - Thanh Thuy	65	10,350	State budget
5		Quy Nhon - Pleiku *, **	160	25,478	PPP
6		Bao Loc - Lien Khuong **	74	14,609	PPP
7	South East	HCMC RR4 * **	105	33,281	PPP
8		Go Dau - Xa Mat	65	10,350	PPP
9	Mekong Delta	Ha Tien - Rach Gia *, **	100	30,000	PPP
10		Hong Ngu - Tra Vinh **	107	5,380	PPP
11		Soc Trang - Tran De ***	37		
Total 2026 - 2030			1,076		

Notes: (\*) Nationally important projects, (\*\*) Implemented by provinces, (\*\*\*) Cost and funding resources are not mentioned in the NSP

#### (4) 2021年～2030年国道

9. 道路舗装、交通安全、橋梁の改修、需要の高い区間の拡幅、統合運用管理システムなどに重点的に取り組んでいる。

#### (5) 投資計画

10. 必要な資金総額は、2021-2030年の間に2兆6,761億8,700万ドンである。資金調達手法としては、国家予算、PPPフレームワーク、外国投資(ODAを中心に)や譲許的融資、そして民間企業からの融資が考えられる。これらの資金は徐々に商業化の方向で記しており、インフラ開発全般、特に交通インフラへの資金計画はそれに応じて調整する必要がある。

表: 高速道路投資計画

No.	項目	2021- 2025	2026- 2030	全計画金額
1	Expressway (billion VND)	441,226	183,668	2,020,221
2	National Highway (billion VND)	50,000	80,000	655,966
Total (billion VND)		491,226	263,668	2,676,187

#### 4) 課題

11. 土地の利用可能性は、道路建設のため及び道路の保護・維持、道路施設の管理・運営などのために考慮する必要がある。長期的な安全性を高めるための道路安全コリドーの管理、2020年までの期間に設定された目標の代わりに計画を達成するための資金条件は、限られた財源のために達成されていない。

## 付録 1.2: 鉄道 NSP サマリー(2021 年 5 月時点)<sup>2</sup>

### 1) 背景

#### (1) 概要

1. 国有鉄道網の総延長は 3,143km、駅数は 277、そのうち本線は 2,703km、駅路・支線は 612km、本線は 7 本である。ネットワーク密度は約 9.5km/1000km<sup>2</sup>。全国の鉄道網には 3 種類の軌間があり、主に 1,000mm (84%)、1,435mm (6%)、1,435/1,000mm (10%)となっている。

#### (2) 問題点

2. 鉄道網は 100 年以上前に建設されたものであり、鉄道インフラが古くなっている。そのため、鉄道施設が不十分であり(曲率半径、縦断勾配、橋梁、軸荷重など)、信号・通信システムも古いため、運行速度が低い。また、地域や他交通セクターやネットワークの連結性もまだ限られている。

3. インフラ管理と鉄道サービスの組織モデルは改善されてきたが、社会経済状況が大きく変化している中で、不十分で効果的ではない。また、鉄道が道路や航空輸送などの他の輸送サービスと競争するには不十分である。



図： 現有鉄道ネットワーク

### 2) 鉄道計画

#### (1) 計画ビジョン

4. 「2030 年をビジョンに入れた 2020 年までの戦略」と「2050 年をビジョンに入れた 2020 年までの戦略」の主な構成要素が挙げられる：(NSP は 2021 年～2030 年に焦点を当てているが、2031 年～2050 年は開発志向が強い)
  - (2030 年まで) 鉄道輸送のシェアを拡大し、鉄道駅と貨物ハブ、大型港、ICD、その他の交通モードとの連携を図る。長距離・中距離の大量貨物と、長距離・都市間・都市内の効率的に旅客を輸送し、社会経済発展の要件を満たす。
  - (2030 年まで) 国家の資源を ODA 投資や民間投資に集中させ最大限に活用するとともに、既存および新規に建設されたインフラ施設の維持管理に力を入れる。
  - (2050 年まで) 国家の社会経済開発戦略に沿い、都市開発、セキュリティ、SEA に関連するもので、交通渋滞や事故の最小化、地方開発に促進する。
  - (2050 年まで) 既存の鉄道を有効活用するとともに、各地域の主要な港や他の輸送手段と連携した新しい鉄道の研究を行う。
  - (2050 年まで) 既存のインフラの維持と、新たに建設されるインフラ施設に注力する。

<sup>2</sup> TDSI の提供資料により調査団がまとめた内容である。

## (2) コリドー

5. NSP では、10 本以上の全国輸送回廊(国家基幹回廊の南北回廊、6 本の国際回廊、4 本の地域間回廊)を定めている。特に、近隣諸国との国際ネットワークは、ベトナムの発展を促進するための重要な要素の一つと考えられている。

## (3) 鉄道需要

6. 2030 年の全国の貨物・旅客輸送量は、11.8～15.7 百万トン/年、22.2～50.5 百万人/年と推定される。

### 3) 優先案件

#### (1) 選定基準

7. (a)経済効率、(b)社会・環境効率、(c)実現可能性を含む、既存の鉄道路線のアップグレード、運行能力の向上、列車運行の安全性の向上、新路線の開発に重点を置いている。



図: 2030 年鉄道ネットワーク



図: 2050 年鉄道ネットワーク

## (2) 案件リストと投資金額

8. 資金源としては、ODA ローン、政府やドナーからの譲許的ローン、政府・企業債、企業債を

優先的に国家予算に割り当てることができる。また、PPP方式でリスク分担の信頼性を確保することで、民間企業の参加を増やすことができる。

9. 優先案件は既存路線のアップグレード、在来線の新路線の開発、南北高速鉄道の3つのグループに分類される。

表：鉄道優先案件と投資金額

No.	案件	2030 まで		2031-2050	
		距離 (km)	コスト (VND bil.)	距離 (km)	コスト (VND bil.)
<b>A</b>	<b>Upgrade of existing line</b>	<b>2,356</b>	<b>45,319</b>	<b>2,356</b>	<b>68,815</b>
1	Hanoi - HCMC	1,726	38,407	1,726	66,415
2	Hanoi - Lao Cai (Yên Viên - Lao Cai)	285	2,500	285	0
3	Hanoi - Hải Phòng (Gia Lâm - Hải Phòng)	96	1,500	96	2,400
4	Hanoi - Thái Nguyên (Đông Anh - Quán Triều)	55	660	54.6	0
5	Hanoi - Lạng Sơn (Yên Viên - Đồng Đăng)	156	1,872	156	0
6	Kép - Chí Linh	38	380	38	0
7	Kép - Lưu Xá				0
<b>B</b>	<b>Development of new lines</b>	<b>228</b>	<b>59,004</b>	<b>2,804</b>	<b>693,372</b>
B1	Main corridors	188	23,504	2,588	636,505
1	Yên Viên - Phủ Lại - Hạ Long - Cái Lân	129	6,000	129	0
2	Lao Cai - Hanoi - Hải Phòng			380	158,842
3	Biên Hòa - Vũng Tàu		5,688	84	51,195
4	Hanoi - Đồng Đăng			156	65,209
5	Bausite line (Đắk Nông - Chơn Thành section, connected with railway to Thi Vai terminal)			67	5,648
6	Dĩ An - Lộc Ninh			128	20,938
7	HCMC - Mỹ Tho - Cần Thơ		100	174	157,154
8	Vũng Áng - Tân Ấp - Mụ Giạ		1,735	103	15,617
9	Tháp Chàm - Đà Lạt			84	12,248
10	Đông Hà - Lao Bảo - cảng Mỹ Thủy			114	16623
11	Tuy Hòa - Buôn Ma Thuột			169	14,247
12	Đắk Nông - Bình Thuận			121	10,200
13	Tây Nguyên (Da Nang - Kon Tum - Đắk Lắk - Bình Phước)			550	46,365
14	Nam Định - Thái Bình - Hải Phòng - Quảng Ninh			120	10,116
15	Hạ Long - Móng Cái			150	22,083
16	Hanoi hub area: develop new eastern ring section (Ngọc Hồi - Lạc Đạo - Yên Viên - Bắc Hồng)	59	9,980	59	30,020
B2	New lines to terminals, industrial parks, economic zones, mines	40	35,500	217	56,867
1	Northern port cluster:				
-	Connecting to Lạch Huyện, branch to Đình Vũ	39.7	35,500	39.7	0
2	North Central Coast port clusters: Nghi Sơn; renovate railway to Cửa Lò...			42	2,602
3	Middle Central Coast port clusters: Chân Mây, Liên Chiểu, Dung Quất...			30	16,579
4	South Central Coast port clusters: Quy Nhơn (Nhơn Hội - Nhơn Bình), Vân Phong, Phan Thiết; renovate railway from Ngã Ba staiton - Cam Ranh terminal (former Ba Ngòi terminal)			55	30,395
5	Thành phố Nam Định - Thịnh Long and khu kinh tế Ninh Cơ			50	7,291
<b>C</b>	<b>North-South HSR</b>	<b>651</b>	<b>561,598</b>	<b>1,552</b>	<b>772,645</b>
1	Hanoi - Vinh	281	273,237	281	0
2	HCMC - Nha Trang	370	288,361	370	0
3	Vinh - Da Nang			422	313,597
4	Da Nang - Nha Trang			479	459,048
	<b>Grand Total</b>	<b>3,234</b>	<b>665,920</b>	<b>6,712</b>	<b>1,534,832</b>



#### 4) 課題

10. 国内の資源はまだ限られている一方で、鉄道インフラの改修や画期的な投資を行うための資金ニーズは膨大である。道路や航空に長い間シェアを奪われてきた鉄道が、再びシェアを取り戻すには多くの時間がかかる。
11. 鉄道への投資はまだ低く、その可能性や利点に見合っていない。限られた国家予算を考慮すると、鉄道部門は、コスト回収の遅さ、長い建設期間、莫大な資金需要、様々なリスクなどの理由から、特に国家予算以外の資金や PPP スキームにとって魅力的ではない。

### 付録 1.3: 内陸水運 NSP サマリー(2021 年 5 月時点)<sup>3</sup>

#### 1) 背景

##### (1) 概要

1. ベトナムには2,360河川や運河があり、その総延長は41,900kmにも及ぶ。紅河デルタやメコンデルタの河川密度は0.2~0.4km/km<sup>2</sup>で、世界的に高い水準になる。稼働中の内陸水運の総延長は17,253kmで、そのうち7,181km(2019年現在)を、VIWA North 3,044km(17路線)、VIWA Central 1,168km(10路線)、VIWA South 2,969km(18路線)が管理している。河川港には、貨物港218港、旅客港12港、一般港2港、特殊港63港がある。

##### (2) 問題点

2. 8,199の内陸水運の係船岸壁のうち、営業許可を取得しているのは75%に過ぎず、内陸水運の制度的規制が不十分であることや、地方の港湾や内陸水運ターミナルの管理が緩いことから、許可のない係船岸壁が営業している。
3. また、内航船は、SIおよびSII船はVIWA、SB船はVinamarineの2段階で管理されている。内陸水運の急速な発展に伴い、国家が管理するための組織が不十分であることが明らかになった。
4. 道路、鉄道、港湾、複合一貫輸送との接続が不十分で、回廊に沿っていくつかのボトルネックを引き起こしている。多くの河川港湾は、性能で最適に使用されていないだけでなく、いくつかの主要港湾/バースは、低い積み下ろし能力が低下し、ハンドリング能力の不均衡になっている。

#### 2) 内陸水運計画

##### (1) 計画ビジョン

5. ベトナムでは費用対効果が高く大型トラックの需要軽減に役立つことより、特にメコン川や紅河デルタ地域において、内陸水運や河岸輸送の開発を優先して推進してきた。2021年から2030年、そして2050年までのIWTセクターのビジョンを以下まとめる。

- (2030年まで)コンテナハンドリングに傾注しつつ旅客・貨物の処理能力を向上させるとも

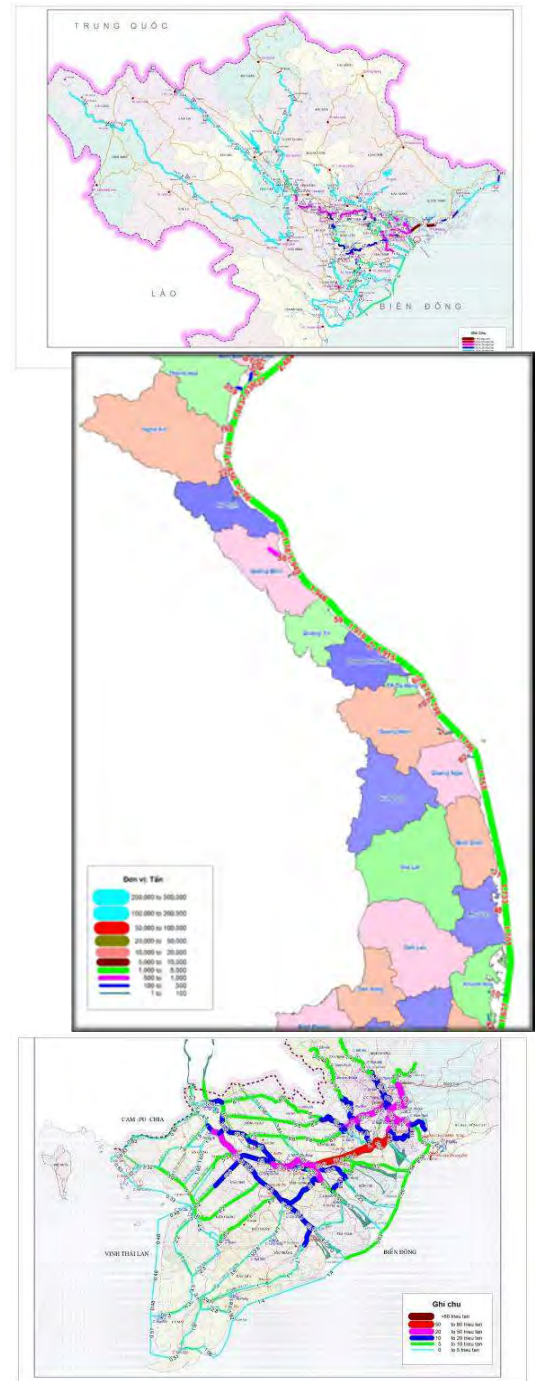


図: 2019年内陸水運貨物密度

<sup>3</sup> TDSI の提供資料により調査団がまとめた内容である。

に、海港、鉄道、道路など他の輸送モードとの接続性を高め、輸送の円滑化を図る。

- (2030 年まで) 内陸水運の管理・運営を強化し、主要ルートの情報同期技術をアップグレードし、主要港や特殊港を近代化し、ICD と連携して内陸水路の港を開発する。

- (2030 年まで) 交通安全を確保するため、情報技術システムに投資する。

- (2050 年まで) 航路や港湾の気候変動や海面上昇への対応力・適応力を向上させ、温室効果ガス排出量削減のために貨物輸送ベースの道路から内陸水運に変更する。

- (2050 年まで) 国内および国際的な主要輸送回廊における内陸水運貨物輸送の割合を増加させ、物流システムと連携した主要経済地域の ICD および主要港湾を近代化する。

- (2050 年まで) 内陸水運ルートの延長により遠隔地に到達する水輸送ルートを完成させ、全国の物流インフラネットワークにおける内陸水運ポートの役割を促進する。

## (2) 内陸水運需要

6. 内陸水運セクターの有望な成長に伴い、貨物・旅客ともに処理能力は徐々に増加している。大きなポテンシャルがあり、他のモードとうまく接続してルートを拡張し、回廊の円滑を確保することが必要である。内陸水運の旅客は 2030 年に 3 億 9700 万人、貨物は 7 億 1500 万トンに達すると予想されている。

## 3) 優先案件

### (1) 選定基準

7. 内陸水運開発は水路、港湾を含み、国のマスタープランに統合するためのインプットとして、コリドーごとに統合的な方法に従うべきである。ベトナムにおける内陸水運プロジェクトの選定基準は以下を考慮する。

- ICD (ドライポート)、物流センター、橋梁クリアランスなど、輸送能力とマルチモーダル機能を強化するための内港バースの条件として、コンテナ輸送ルートの可能性。

- 川-海間の水路、内航船、島嶼につながるルート、国際ルートの可能性。

- 経済効率を確保するために、道路、海港、既存の鉄道施設など他のモードとの接続性(航空輸送との接続は主に観光目的)。

- 内陸水運インフラを改修・アップグレードするプロジェクトに投資する、国家予算、ODA、世界銀行、民間企業などの投資メカニズム。

8. ベトナム政府は、内陸水運と道路を結ぶ ICD の開発を優先し、内陸水運の貨物シェアを増加させ、道路の混雑と鉄道の不足の問題を軽減することを目指す。

### (2) 案件リストと投資金額

9. ベトナム政府は、2021 年から 2030 年、2031 年から 2050 年の内陸水運開発プロジェクトのリストを提示し、金額を推定している。

表：2021-2030 年内陸水運優先案件

No	案件	コスト (VND bil.)	予定資金源
<b>I</b>	<b>Northern Region</b>	<b>17,700</b>	
1	Clearance Lifting for Duong River (Corridor No. 1)	2,300	State Budget
2	River project connecting Day river - Ninh Co (Corridor 3)	1,800	State Budget
3	Quang Ninh - Ninh Binh route over Luoc River - Phase 1 (Corridor 2)	7,200	State Budget
4	Project on Transport Route of Hoa Binh - Son La - Lai Chau hydropower reservoir area	300	State Budget
5	Việt Trì – Yên Bái - Lào Cai Route (section Việt Trì - Yên Bái)	1,500	State Budget
6	Project on river and sea transport route through Tra Ly estuary	3,500	Private Sector
7	Project to renovate and upgrade new waterway transport routes in the North	500	Private Sector
8	Improve and upgrade insufficient-clearance bridges (phase 1)	600	State Budget
<b>II</b>	<b>Central Coast Region</b>	<b>750</b>	
1	IWT Route of Ninh Binh - Thanh Hóa	450	State Budget
2	Upgrade waterways on Giang River (phase 2)	300	State Budget
<b>III</b>	<b>Southern Region</b>	<b>15,550</b>	
1	Chợ Gạo River Route Project	1,500	State Budget
2	Chợ Đệm – Bến Lức IWT Project	200	State Budget
3	Project to develop the logistic and waterway corridors in the South	5,800	WB
4	Improve Rach Gia - Ca Mau waterway	1,800	State Budget
5	Mương Khai - Đốc Phủ Hiền River Route Upgrading	2,300	State Budget
6	IWT route on Saigon River (Ben Suc – Ben Cui downstream of Dau Tieng Dam)	450	State Budget
7	IWT route on Ham Luong River, from Tien River Confluence to Ham Luong Estuary	500	Private Sector
8	Improvement, upgrade of new waterways in the South	3,000	Private Sector
9	Improve and upgrade insufficient-clearance bridges (phase 1)	1,200	State Budget

表：2050 年まで実施可能な案件

No	案件	コスト (VND bil.)	予定資金源
<b>I</b>	<b>Northern Region</b>	<b>45,700</b>	
1	Project of Water Transport at Day Estuary - Ninh Binh - Phu Ly	2,500	Private Sector
2	Project of Hai Phong - Hanoi waterway transport route through Van Uc estuary	2,200	State Budget
3	Project on Viet Tri - Lao Cai route (section of Yen Bai - Lao Cai, construction of dams and locks)	15,000	Private Sector
4	Project to renovate and upgrade low-clearance bridges in the North	6,000	STATE BUDGET
5	Project to improve and upgrade other waterway transport routes, Riverizing urban river sections, routes to islands in the North	20,000	State Budget, Private Sector
<b>II</b>	<b>Central Coast Region</b>	<b>3,180</b>	
1	Ma River IWT Project – section from Bong Junction to Vinh Ninh Junction (Thanh Hóa Prov.)	80	State Budget
2	Len River IWT Upgrading Project (Thanh Hóa Prov.)	120	State Budget
3	Lam river IWT transport Project (Nghe An province)	120	State Budget, Private Sector
4	Project of IWT route Ho Do - Cua Sot (Ha Tinh province)	60	State Budget, Private Sector
5	Gianh River Route upgrading project - Phase 2 (Quang Binh province)	250	State Budget
6	Project on Huong river route from Thuan An estuary to Tuan junction (Thua Thien – Hue Province)	200	State Budget /ODA
7	Project on Co Co-Truong Giang river route from Han-Cua Dai confluence to Ky Ha Port (QN - Da Nang)	350	State Budget /ODA

No	案件	コスト (VND bil.)	予定資金源
8	Project to renovate and upgrade other waterway transport routes, routes to islands in the Central Region	2,000	State Budget
<b>III</b>	<b>Southern Region</b>	<b>51,910</b>	
1	Project of Dredging and renovating the Saigon - Kien Luong route, the section from Lap Vo Sa Dec - Kien Luong	1,660	State Budget, Private Sector
2	Saigon - Ca Mau Line Upgrading Project (Can Tho - Ca Mau Section)	1,700	State Budget, Private Sector
3	Project of upgrading Rach Soi - Hau Giang River	1,550	State Budget, Private Sector
4	Rach Gia Bypass Project	2,500	State Budget, Private Sector
5	Improvement of bridges with short air-clearance in the South	14,500	State Budget, Private Sector
6	Improvement, upgrade of other waterways, canalization of urban river sections, routes to southern islands	30,000	State Budget, Private Sector

10. 資金源は、国家予算と、交通モード間の接続性を強化するための世界銀行などの ODA 融資である。運輸省のデータによると、2010 年から 2018 年までの内陸水運メンテナンスのための資金は、必要性の 60～70%しか満たしておらず、2016 年から 2019 年までは内陸水運建設のための投資は行われていない。ベトナムでは、内陸水運のインフラを整備するために、PPP スキームなどの民間セクターからの投資が必要となると考えられる。

#### 4) 課題

11. 現在、内陸水運の港や埠頭の国家管理は、不完全な法的文書システムなど多くの問題を抱えて、それがまた乗組員の不足や管理問題につながっている。したがって、インフラだけでなく、産業界の現在のニーズや科学技術の応用に追いつくための内陸水運システムの制度的整備も重要である。他の交通モードとの接続、ICD の開発、内陸水運投資計画の見直しは、ニーズ、国家予算の能力、予算配分の妥当性に焦点を当てて、全体的に計画されるべきである。

## 付録 1.4: 港湾 NSP サマリー(2021 年 5 月時点)<sup>4</sup>

### 1) 背景

#### (1) 概要

1. ベトナムの 34 の港湾は、3 つのクラスに分類されている。3 つの貨物積替・国際ゲートウェイ港(クラス IA:ハイフォン、バリア・ブンタウ、バンフォン)、12 の全国・地域一般港(クラス I)、19 の地域一般港(クラス II)である。そのうちのいくつかは特殊港湾(クラス III)に分類され、重要工業地帯や特殊商品(石油、石油製品、石炭、鉱石、セメント、クリンカーなど)に直接サービスを提供して、工業地帯のインフラに不可欠な要素となっている。ベトナムには約 94km の船舶係留岸壁があり、その総容量は年間 6 億 6500 万トンを超える。ベトナムの港湾システムは 6 つグループで構成されていたが(2014 年)、今回の NSP では既存の社会経済地域の分類を考慮し、港湾システムの 2021-2030 年および 2050 年までのビジョンとともに 5 つのグループにまとめている。

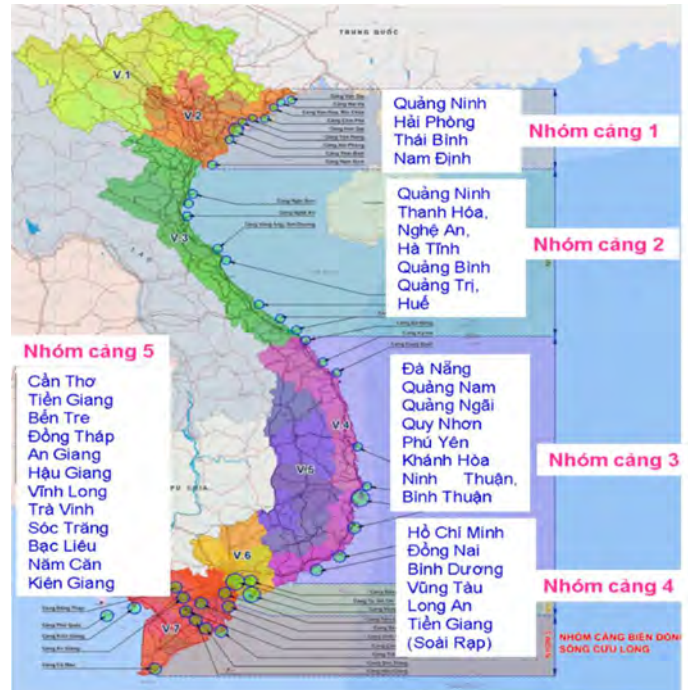


図: 港湾グループ

#### (2) 問題点

2. 計画の主な欠点は、不十分な統合と不均等な分配、開発目標と処理能力のギャップなどである。開発の進捗やアクセス経路については、港湾とアクセスインフラの不完備、質の低さ、技術の古さなどが指摘されている。2014 年に承認された港湾 2020 計画が終了し、2050 年までのビジョンを持つ 2030 年までの新しい港湾開発計画を策定する必要がある。

### 2) 港湾計画

#### (1) 計画ビジョン

3. NSP 港湾計画は、輸出入需要を満たすための投資の方向性を示す基礎となり、社会経済的發展を促進する。2030 年(2014 年承認)と 2050 年のビジョンが以下記載される。
- (2030 年まで)10 万 DWT (載貨重量トン)以上の船舶(8,000TEU のコンテナ船)を扱う港を中心に、ネットワーク全体の均一性を確保するための適切な開発・維持・改良を行う。
  - (2030 年まで) 港湾間の総合的な開発を促進し、全国的交通網、ドライポートシステム、地域の商品流通・物流センターとのスムーズな接続を確保する。
  - (2030 年まで)ハイフォン、バリア・ブンタウ、主要経済地域の国際ゲートウェイ港に重点を置く。

<sup>4</sup> TDSI の提供資料により調査団がまとめた内容である。

- (2050年まで)過去20年間の発展を継承し、機能のアップグレードと転換を図り、港湾システムの統合的かつ効率的な運用を実現する。
- (2050年まで)物流サービスの促進に重要な役割を果たす港湾および港湾クラスターを發展させる。
- (2050年まで)経済圏や沿岸産業の發展の原動力となるよう、地域や地方の經濟開發と連携して海港インフラを開發する。

## (2) 港湾需要

4. 貨物には、(a)コンテナ、(b)一般、バルク、(c)液体がある。NSPの貨物処理量は、2030年と2050年にそれぞれ11億40.1~14億22.5、28億5390万トンに達し、旅客数は2030年に10,103~10,249人、2050年に14,384~15,080千人になると予測されている。

## 3) 優先案件

### (1) 目標

5. ベトナムは、物流インフラ、インランドデポ、海港と国内の地域、地方、そして世界の国々を結ぶアクセス道路を備えた海港システムを構築する。その目標は以下にまとめる。

- 2030年までに、11億4,010万~14億2,250万トン/年(コンテナ3790万~4,660万TEU/年の場合)、1,010万~1,030万人/年。

- 2050年:28億5,320~33億5,390トン/年(コンテナ8,860~1億3,860万TEU/年の場合)、1,440~1,510万人/年。

6. 2030年、2050年の5グループ別の港湾ハンドリング能力を示す。

表: 2030年と2050年港湾取扱量

グループ	港湾	開発計画:貨物量 (年間106トン)	
		2030まで	2050まで
1	Quang Ninh, Hai Phong, Thai Binh, Nam Dinh	304.9-367.3	-
2	Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue	153.4-226.5	160.2-235.1
3	Da Nang, Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan, Binh Thuan	138.2-180.5	415.4-472.9
4	HCMC, Ba Ria-Vung Tau, Dong Nai, Binh Duong	460.9-540.1	921.6-1,146.4
5	Can Tho, Tien Giang, Ben Tre, Dong Thap, An Giang, Hau Giang, Vinh Long, Tra Vinh, Soc Trang, Bac Lieu, Ca Mau, Kien Giang	63.8-79.5	207.9-241.1

### (2) 案件リストと投資金額

7. 下表は、2030年までに港湾インフラ施設開發の優先課題と予想コスト(10億VND)を示す。

表: 港湾優先案件と投資金額

No.	案件	推定コスト
<b>A</b>	<b>Priority 1</b>	<b>18270-20850</b>
1	Upgrading of the Cai Mep - Thi Vai channel, from bouy "0" to Go Dau terminal	5000-5500
2	Renovation and upgrade of large vessel Song Hau channel Phase 2	2200-2500
3	Development of roads to berths No. 3,4,5,6,7,8 in the Lach Huyen Terminal, Hai Phong seaport	1800-2000
4	Renovation and upgrade of the Hon Gai - Cai Lan navigational channel and the return zone	400-500
5	Improvement and upgrading of Da Nang channel for vessels of 50,000 tons	120-200
6	Development of a channel to Tho Quang terminal area, Da Nang port for vesselsof 5,000-10,000 tons	100-150
7	Improvement and upgrading of Vung Ang channel for vessels of 50,000 tons (including improvement and	600-650

No.	案件	推定コスト
	upgrading of sand dykes)	
8	Improvement and upgrading of navigational channels into terminals in Southern Nghi Son area and Establishment of public channels to terminals in Northern Nghi Son and Thanh Hoa areas	1400-1500
9	Improvement and upgrading of South Cua Lo channel and essential protection works for vessels of 30,000 tons	420-500
10	Dredging of navigational channels through Tran De estuary for vessels of 2,000 tons (from Vam Nhon My to Tran De estuary)	220-250
11	Improvement and upgrading of Cua Viet channel for vessels of 5,000 tons (including improvement and upgrading of sand dykes)	500-600
12	Establishment of a public channel to the ports in Cam Pha area and Hon Net transshipment area for vessels of 200,000 tons	1000-1500
13	Improvement and upgrading of the Saigon - Vung Tau channel (from Ganh Rai buoy to Thieng Lieng canal) for vessels of 70,000 full load and larger vessels offload	400-500
14	Development of Lach Huyen diversion works and expanding the curved section downstream of Ha Nam canal - Hai Phong navigational channel	100-150
15	Improvement and upgrading of Quy Nhon channel for vessels of 50,000 tons	450-500
16	Improvement and upgrading of Ba Ngoi channel for vessels of 50,000 tons	160-200
17	Development of breakwaters and access channels to Lien Chieu port for vessels of 100,000 tons	3000-3200
18	Development of storm shelter anchorage area (Cua Hoi - Nghe An, Ha Tinh; Gianh river - Quang Binh; Thuan An - Thua Thien Hue)	400-450
<b>B</b>	<b>Priority 2</b>	<b>7970-9400</b>
1	Improvement and upgrading of Gianh estuary channel for vessels of 5,000 tons (including sand dyke)	900-1000
2	Improvement and upgrading of Hon La navigation channel for vessels of 50,000 tons	200-300
3	Improvement and upgrading of Chan May navigation channel for vessels up to 50,000 tons (including extension of breakwaters)	1000-1100
4	Improvement and upgrading of the Dua river navigational channel for vessels of 10,000 tons	170-200
5	Improvement and upgrading of Diem Dien navigation channel (including channel adjustment dyke)	700-800
7	Development of Cua Lo channel (Quang Nam) for vessels of 50,000 tons	5000-6000
<b>C</b>	<b>Priority 3</b>	<b>9150-9900</b>
1	Improvement and upgrading of Dinh An channel for vessels of 5,000 tons	300-350
2	Improvement and upgrading of Cua Tieu channel for vessels of 5,000 tons	150-200
3	Improvement and upgrading of Nam Can channel for vessels of 3,000 - 5,000 tons	500-550
4	Improvement and upgrading of Thuan An channel for vessels of 3,000 - 5,000 tons	450-500
5	Improvement and upgrading of Phan Thiet channel for vessels of 2,000 tons	250-300
6	Dredging and upgrading of Soai Rap channel in phase 3 for vessels of 50,000 tons	5000-5200
7	Improvement and upgrading of Lach Sung channel for vessels of 3,000 tons	500-600
8	Development of infrastructure for maritime safety assurance and State management of maritime specialties in seaport areas	2000-2200
	<b>Total</b>	<b>35390-40150</b>

8. 資金源は (a)航路、停泊地、その他の関連インフラの開発、改良、改善は国家予算で、(b) 港湾開発プロジェクトは、詳細な港湾開発計画に基づいて民間企業の資金により、2 つに分かれている。

#### 4) 課題

9. 2050 年をビジョンに入れた 2021-2030 年のベトナムの港湾マスタープランが承認された後は、古い計画が置き換えられ、再び投資が承認されることになる。そのため、港湾への投資が途切れないように、ベトナム海事局は、港湾群の詳細計画などを提案するとともに、民間企業の投資を促し、公共部門や海港の O&M の技術的なガバナンスを強化していく。



## 付録 1.5: 航空 NSP サマリー(2021 年 5 月時点)<sup>5</sup>

### 1) 背景

#### (1) 概要

1. 2020 年、ベトナムの航空セクターは、国際空港 9 か所、国内空港 13 か所の計 22 か所の空港を管理・運営している。空港は 3 つの地域に分類され、北部(3I4D)、中部(3I4D)、南部(3I5D)、それぞれに空港当局がある。各地域には、ハブ空港として機能する 1 つの国際空港と、グループまたはクラスターを形成する国内空港を持つ。

#### (2) 問題点

2. **容量不足。**航空におけるニーズの高まりにより、22 空港のうち 10 空港は、4 つの重要国際空港(ノイバイ、ダナン、カムラン、タンソンニャット)で最大 1.5 倍の容量超過が発生している。しかし、貨物処理能力は低く、2019 年には 200 万トン近くにとどまっている。また、多くの地方は、空港の建設や国際化へのアップグレード、空港容量の増加を希望している。
3. **接続性の悪さ。**空港へのアクセス性、道路や鉄道などの交通機関との接続性はまだ十分ではない。特に、タンソンニャット空港の接続性はよくないと指摘されている。
4. **資金の不足。**計画 236 は承認されたが、計画に従うための資金が不足している。その上、土地や管理に関するメカニズムや政策が進行中の状況に追いついておらず、民間企業の参加を募ることが困難になっている。また、ACV が委員会(CMSC)に移管されたことで、資金問題も発生している。



図: 2020 年ベトナム空港位置

### 2) 空港計画

#### (1) 計画ビジョン

5. 空港ネットワーク計画のビジョンは、2021~2030 年と 2050 年までのビジョンの 2 つの期間に分かれている。
  - (2030 年まで)2030 年までに 28 の空港を整備するため、2018 年に承認されたプラン 236 を考慮する。
  - (2030 年まで) 平野部や山間部の半径 100km、200km 以内で他のモード、地域の交通特に大都市でインフラとの接続を保つ。
  - (2030 年まで) 国内航空と地域航空、国際航空の効果的な接続を確保する。
  - (2050 年まで)63 省すべての空港評価・再評価基準を活用し、パフォーマンスを評価する。

<sup>5</sup> TDSI の提供資料により調査団がまとめた内容である。

- (2050 年まで)100km 以内にあるすべての空港にアクセスし、2 つの主要都市の空港が国際的なハブ空港として機能することを目指す。

- (2050 年まで)新しい空港が必要かどうかを評価するために、空港評価基準を利用する。

6. 空港開発以外にも、航空物流センター(2019 年は主要 3 空港のみ、バンドン、チューライ、ロンタンで計画)、主要 2 空港の複合交通機関の接続、その他の空港の接続などが含まれる。

## (2) 航空需要

7. NSP の予測では、航空旅客は 2030 年に 2 億 7580 万人/年、2050 年には 4 億 9070 万人/年となる。貨物は、2030 年に 410 万トン/年、2050 年に 1,620 万トン/年。

## (3) 空港容量と計画

8. NSP はインフラのアップグレードと開発の緊急性を強調している。容量とアクションをまとめた。

- (2030 年容量)ソニャット空港 5,000 万人、ノイバイ空港 6,000 万人、ダナン空港 2,500 万人/年に加え、ロンタン空港 1 期を 2,500 万人/年で開発・運用し、2 期投資の準備調査を行う。

- (2030 年アクション) 全 28 空港または、ライチャウ空港とナサンを除いて 26 空港に新空港を開発し、現在の空港に運用要件を満たすように拡張する。

- (2050 年アクション) マルチモーダル輸送モデルに基づいて飛行ルートネットワークを開発し、カオバン空港とハノイ首都圏第 2 空港を建設し、国内線と国際線の接続性を強化する。



図: 2030 年空港(28 空港)



図: 2050 年空港(29 空港)

### 3) 優先案件

#### (1) 目標

9. このリストは、2030年と2050年までに、輸送需要を満たし、国際市場と統合できる、統合された近代的な空港システムを策定するためのロードマップとなる。土地利用と資金要求、投資ロードマップを明らかにすることが重要である。

#### (2) 案件リストと投資金額

10. 計画実施のための資金源としては、ODA ローン、国家予算、金融機関からの商業ローン、民間によるPPP(バンドン空港の成功例)など様々な資金源がある。

11. 一方、政府は、法的資金源の手配と動を積極的に行うために、サポート提供、譲許的融資の取得許可、商業的融資に対する保証の提供、航空インフラの開発に有利なメカニズムと政策(税金、土地)の作成を検討している。

12. 必要な資金は、2021-2030年に4031億600万ドン、2030-2050年に6026億7800万ドン。そのうち、主にエアサイド、オフィス、土地の取得と移転のための国家予算で、残りは企業の自己資金とその他である。

#### 4) 課題

13. 2030年までの28空港の総土地面積は、空港の開発、アップグレード、拡張のニーズに沿ったものとなるが、土地取得、移転、3つの主要空港から離れた場所での軍事飛行活動の移転のニーズがある。NSPによると、いくつかの空港がすべての省や都市に対応できるように、省や都市の要求に応じて新規空港は必要がないという。ハノイ首都圏内の第2国際空港の位置特定もNSPの大きな問題である。

表: 空港優先案件と投資金額

No.	空港	必要資金 (VND bil.)	開発項目
<b>I - Period 2021 - 2025</b>		<b>276,381</b>	
1	Noi Bai International Airport	96,599	Improvement
2	Long Thanh International Airport	109,000	Improvement
3	Tan Son Nhat International Airport	12,233	Improvement
4	Chu Lai International Airport	10,579	Improvement
5	Cam Ranh International Airport	23,760	Improvement
6	Da Nang International Airport	19,505	Improvement
7	Con Dao Airport	1,605	Improvement
8	Dien Bien Airport	3,100	Improvement
<b>II - Period 2025 - 2030</b>		<b>126,725</b>	
1	Van Don International Airport	5,280	Improvement
2	Cat Bi International Airport	10,568	Improvement
3	Tho Xuan International Airport	8,887	Improvement
4	Vinh International Airport	14,942	Improvement
5	Phu Bai International Airport	16,578	Improvement
6	Can Tho International Airport	7,426	Improvement
7	Phu Quoc International Airport	9,595	Improvement
8	Lien Khuong International Airport	4,591	Improvement
9	Lai Chau Airport	4,350	New
10	Na San Airport	5,688	New
11	SaPa Airport	4,200	New
12	Quang Tri Airport	3,885	New
13	Pleiku Airport	4,583	Improvement
14	Phu Cat Airport	2,864	Improvement
15	Tuy Hoa Airport	1,385	Improvement
16	Buon Ma Thuot Airport	3,814	Improvement
17	Phan Thiet Airport	7,714	Improvement
18	Dong Hoi Airport	2,804	Improvement
19	Rach Gia Airport	4,454	Improvement
20	Ca Mau Airport	3,117	Improvement
<b>III - Period 2030 - 2050</b>		<b>596,352</b>	
1	Cao Bang Airport	-	New
*	Other airports	-	Improvement

Note: Improvement includes expansion and upgrade.

付録 2.1: 省別現在のベトナムの社会経済データ

Level 2 Regions	Level 1 Provinces	Population				GRDP					
		Population in 000'	Population in 000'	AARG	Density pers/km <sup>2</sup>	VND Billion	VND Billion	AARG	Sector Share % for 2020		
		2010	2020	2010-2020	2020	2010	2020	2010-2020	1	2	3
Red River Delta	T.P.Ha Noi	6589	8150	2%	2427	241971	599667	9%	2%	25%	72%
	Vinh Phuc	1008	1163	1%	941	32178	59131	6%	8%	64%	28%
	Bac Ninh	1041	1393	3%	1693	37111	118979	11%	3%	78%	19%
	Quang Ninh	1155	1333	1%	216	37675	104953	10%	6%	56%	38%
	Hai Duong	1713	1906	1%	1142	40714	76069	6%	11%	57%	32%
	T.P. Hai Phong	1858	2044	1%	1309	55298	164656	10%	4%	53%	43%
	Hung Yen	1138	1264	1%	1358	21413	52271	8%	11%	62%	26%
	Thai Binh	1785	1864	0%	1175	29841	49554	5%	26%	41%	33%
	Ha Nam	786	857	1%	994	12911	33436	9%	11%	61%	28%
	Nam Dinh	1830	1789	0%	1072	26103	43780	5%	22%	41%	38%
Ninh Binh	901	988	1%	713	17207	33626	6%	13%	44%	43%	
<b>Sub-total</b>	<b>Region RRD</b>	<b>19803</b>	<b>22749</b>	<b>1%</b>	<b>1070</b>	<b>552422</b>	<b>1336123</b>	<b>8%</b>	<b>6%</b>	<b>43%</b>	<b>51%</b>
Northern Midlands and Mountains	Ha Giang	734	868	2%	109	6381	13554	7%	32%	25%	42%
	Cao Bang	513	535	0%	80	5604	10685	6%	23%	24%	53%
	Bac Kan	297	316	1%	65	3512	7161	7%	29%	17%	54%
	Tuyen Quang	730	790	1%	135	10224	20188	6%	24%	33%	42%
	Lao Cai	627	741	2%	116	10407	27607	9%	15%	43%	42%
	Yen Bai	751	829	1%	120	9342	17038	6%	25%	30%	45%
	Thai Nguyen	1131	1299	1%	368	20368	67909	12%	11%	62%	27%
	Lang Son	736	787	1%	95	10686	18499	5%	22%	26%	52%
	Bac Giang	1564	1821	1%	467	19369	72487	13%	15%	64%	21%
	Phu Tho	1320	1473	1%	417	19634	41963	7%	20%	41%	39%
	Dien Bien Phu	501	609	2%	64	5234	11362	7%	19%	22%	59%
	Lai Chau	381	469	2%	52	3010	11184	13%	16%	43%	41%
	Son La	1099	1267	1%	90	N/A	27698	N/A	27%	32%	41%
Hoa Binh	793	861	1%	187	15274	29307	6%	27%	32%	41%	
<b>Sub-total</b>	<b>Region NMM</b>	<b>11177</b>	<b>12665</b>	<b>1%</b>	<b>133</b>	<b>139046</b>	<b>376644</b>	<b>9%</b>	<b>19%</b>	<b>44%</b>	<b>36%</b>
North Central and Central Coastal Areas	Thanh Hoa	3406	3660	1%	329	50428	94624	6%	18%	43%	39%
	NgheAn	2929	3375	1%	205	41520	79918	6%	23%	32%	46%
	Ha Tinh	1228	1298	1%	217	15430	44701	10%	14%	49%	37%
	Quang Binh	849	904	1%	113	12439	23615	6%	20%	26%	54%
	Quang Tri	602	637	1%	138	9813	18817	6%	23%	25%	52%
	Thua Thien-Hue	1091	1139	0%	232	19024	29537	4%	13%	35%	52%
	TP. Da Nang	927	1153	2%	897	28923	62961	7%	2%	25%	73%
	Quang Nam	1427	1507	0%	143	24611	59792	8%	12%	50%	38%
	Quang Ngai	1219	1238	0%	240	29238	44159	4%	20%	45%	35%
	Binh Dinh	1492	1496	0%	247	26350	47119	5%	29%	29%	42%
	Phu Yen	867	877	0%	175	13729	25241	6%	26%	30%	44%
	Khanh Hoa	1165	1241	1%	241	29874	48221	4%	11%	31%	58%
	Ninh Thuan	568	596	0%	178	7168	16910	8%	36%	25%	39%
	Binh Thuan	1175	1242	1%	156	22830	42059	6%	31%	30%	39%
<b>Sub-total</b>	<b>Region NCCCA</b>	<b>18944</b>	<b>20362</b>	<b>1%</b>	<b>213</b>	<b>331376</b>	<b>637674</b>	<b>6%</b>	<b>18%</b>	<b>36%</b>	<b>46%</b>
Central Highlands	Kon Tum	442	550	2%	57	6028	13449	8%	23%	28%	49%
	Gia Lai	1302	1537	2%	99	21500	38613	5%	31%	25%	44%
	Dak Lak	1754	1894	1%	145	27684	46755	5%	38%	15%	47%
	Dak Nong	505	632	2%	97	8107	17929	7%	41%	17%	42%
	Lam Dong	1204	1311	1%	134	22320	46963	7%	37%	20%	42%
<b>Sub-total</b>	<b>Region Central Highlands</b>	<b>5207</b>	<b>5924</b>	<b>1%</b>	<b>109</b>	<b>85639</b>	<b>163708</b>	<b>6%</b>	<b>35%</b>	<b>20%</b>	<b>45%</b>
Southeast Southeast	Binh Phuoc	888	1009	1%	147	20052	39542	6%	32%	30%	38%
	Tay Ninh	1073	1178	1%	291	28341	47966	5%	27%	40%	33%
	Binh Duong	1620	2502	4%	929	100965	235550	8%	3%	75%	22%
	Dong Nai	2575	3143	2%	536	73667	193227	9%	11%	64%	25%
	Ba Ria-Vung Tau	1012	1161	1%	586	154743	238136	4%	4%	82%	14%
T.P. Ho Chi Minh	7378	9108	2%	4418	463295	877467	6%	1%	29%	70%	
<b>Sub-total</b>	<b>Region Southeast</b>	<b>14546</b>	<b>18100</b>	<b>2%</b>	<b>770</b>	<b>841062</b>	<b>1631889</b>	<b>6%</b>	<b>4%</b>	<b>48%</b>	<b>48%</b>
Mekong River Delta	Long An	1443	1695	1%	377	34762	73124	7%	18%	53%	29%
	Tien Giang	1678	1773	1%	706	35661	58079	5%	40%	30%	30%
	Ben Tre	1257	1293	0%	540	21992	33264	4%	33%	21%	46%
	Tra Vinh	1007	1014	0%	430	15006	37593	9%	33%	39%	29%
	Vinh Long	1027	1027	0%	673	20513	31826	4%	34%	21%	45%

Level 2 Regions	Level 1 Provinces	Population				GRDP					
		Population in 000'	Population in 000'	AARG	Density pers/km <sup>2</sup>	VND Billion	VND Billion	AARG	Sector Share % for 2020		
		2010	2020	2010-2020	2020	2010	2020	2010-2020	1	2	3
	Dong Thap	1670	1607	0%	475	30537	51419	5%	37%	25%	38%
	An Giang	2149	1918	-1%	542	45009	52069	1%	39%	15%	46%
	Kien Giang	1700	1736	0%	273	44086	59096	3%	43%	23%	34%
	Can Tho	1195	1244	0%	864	42641	52482	2%	12%	37%	51%
	Hau Giang	760	734	0%	453	6316	21678	12%	29%	27%	44%
	Soc Trang	1298	1204	-1%	363	23662	34160	3%	48%	16%	36%
	Bac Lieu	863	912	1%	342	16671	26217	4%	48%	18%	34%
	Ca Mau	1210	1199	0%	230	18766	40597	7%	32%	39%	29%
<b>Sub-total</b>	<b>Region MRD</b>	<b>17255</b>	<b>17356</b>	<b>0%</b>	<b>425</b>	<b>355620</b>	<b>571605</b>	<b>4%</b>	<b>33%</b>	<b>30%</b>	<b>37%</b>
<b>Total</b>	<b>National</b>	<b>86933</b>	<b>97155</b>	<b>1%</b>	<b>294</b>	<b>2305164</b>	<b>4717643</b>	<b>7%</b>	<b>12%</b>	<b>41%</b>	<b>46%</b>

Source: JST

## 付録 2.2: 地域別経済の特徴 2010-2019

Economic Evolutions in Brief
<p><b>Red River Delta.</b> The AAGR of the GRDP 2010–2019 is estimated at 10%. The highest rates were recorded in Bac Ninh (12%), Hai Phong (11%), Ha Nam and Quang Ninh (10%); the lowest ones in Thai Binh and Nam Dinh (5%). Hanoi represents 45% of the GRDP; with 72% of its own GDP generated by the tertiary sector, by far the highest share in the region. But the regional economic backbone eventually forms now a crescent from Mong Cai in the northeast to Vinh Phuc in the northwest. The Red River Delta region shelters active technological innovation and potential future industrial excellence sectors, largely export-oriented<sup>6</sup>. Large infrastructure construction projects<sup>7</sup> have boosted the economic growth. FDI has largely stimulated the industrialization<sup>8</sup>. The economic development has however singled out geographical disparities: In 2019, the four provinces above mentioned and Hanoi altogether represented nearly 74% of the GRDP. Aside from Hanoi (VND 660,000 billion), only Bac Ninh, Quang Ninh and Hai Phong have recorded a production exceeding VND100,000 billion<sup>9</sup>. In 2019, only Thai Binh and Nam Dinh provinces remained the most agriculture/fishing dependent economies (respectively 26% and 22% of their production). The concentration of industrial activities and urbanization in the lowlands of the region is challenging: land and water scarcity (endangering agriculture production, affecting daily livelihood), fluidity of traffic (all modes). The capacity of the region to generate further comparative advantages for investments is at stake.</p>
<p><b>Northern Midlands and Mountains.</b> The regional GRDP grew at an average of 10% over the 2010–2019 period. Easily accessible lowlands around Hanoi-Haiphong corridor have generated the highest industrial activity: west of Bac Giang, south of Thai Nguyen, and also Lao Cai (10%). Important land border gates in Lao Cai and Lang Son are now well connected to Hanoi Capital by train and expressway. Mountainous or hilly areas essentially generate revenues from tourism and agriculture. Some of the less developed provinces are blessed with important natural resources (woods, medicinal plants, iron, apatite to produce fertilizers, gemstones and rare-earth [Lai Chau]), including for exports<sup>10</sup>. Hydropower plants over 1,000MW in Lai Chau, Yen Bai, Son La, and Hoa Binh generate a large part of the electricity used by the Red River Delta's economy. In order to ensure a sustainable development, and to avoid adverse effects downstream (e.g. impact of afforestation on floods in the delta), regional challenges are the protection of eco-systems and water resources, the preservation of cultural heritage and educational progress and poverty alleviation in remote areas.</p>
<p><b>North Central and Central Coastal Areas (NCCCA).</b> The economic situation varies significantly within the region. Large industrial facilities were constructed along the coast (Nghi Son, Chu Lai, Dung Quat, Da Nang port and enlarged airport). The AAGR is estimated at 6% over the period 2010-2019. The highest rates were recorded in Ha Tinh (11%) and Khanh Hoa (9%). All coastal provinces have developed actively marine economy. However, Thanh Hoa, Nghe An and Ha Tinh<sup>11</sup>, closer to Red River development corridor, have developed heavy and manufacturing industries. Danang confirmed its commitment in services (logistics, tourism hub), which boosted also economies of Quang Nam and Thua Thien Hue. However, Danang still cannot be regarded as the economic centre of NCCCA, of which northern part remains still more connected to the Red River Delta's economy and its southern part to the Southeast's economy. The connectivity on land still needs improvements (limited railway service, difficult road access to the west (Central Highlands and Laos) and intra-regional traffic dependency on Highway 1. Furthermore, the region remains much vulnerable to typhoons droughts and floods. North central provinces (Quang Binh, Quang Tri) and southern provinces (Khanh Hoa put aside<sup>12</sup>) still struggle to attract massive investments out of agri-business and tourism. The emerging heavy industry or renewable energy sector (wind and photovoltaic power plants, small hydropower plants, biomass) might represent future additional economic assets.</p>
<p><b>Central Highlands.</b> The region is traditionally dedicated to agriculture and forestry. The AAGR of GRDP was 6% between 2010 and 2019. The highest rates (Dak Nong and Kon Tum [8%]) and the lowest one (5% in Dak Lak) do not differ much. Yet, disparities between recorded volumes are significant: in 2019, Lam Dong's production is almost 3.5 times that of Kon Tum. Services, essentially tourism, now generate substantial revenues in all provinces. The urbanization remains limited, with Buon Me Thuot and Pleiku as the main regional urban centers<sup>13</sup>. One regional challenge is the access to qualified manpower. In spite of a recent production increase, the generation of "bauxite and aluminium rent" (Lam Dong [Tan Rai], Dak Nong [Nhan Co]) is just emerging. Capital investments and job opportunities would particularly benefit to Dak Lak and southern Lam Dong provinces: This being said, aluminium production is also an energy intensive business; it requires power and transport infrastructure to facilitate deliveries to industrial centers, in Vietnam and abroad (e.g. to China).</p>
<p><b>Southeast.</b> The regional economic growth is estimated at 7% over the period 2010-2019, HCMC dominates the economy (54% of the GRDP in 2019). Southern Binh Duong, southern Dong Nai, and western Ba Ria-Vung Tau emerged as key national industrial and manufacturing areas following massive industrial investments, in particular FDI<sup>14</sup>. Economic attractiveness of these areas increased with the development of infrastructure key to international trade (Cai Mep - Thi Vai Port, access to Tan Son Nut airport, future Long Thanh airport, etc.). Job opportunities there have accelerated in-migrations from other provinces and resulting in conurbations including HCMC Thu Dao Mot and Bien Hoa. These areas are now prone to traffic congestion, higher housing and land prices and</p>

<sup>6</sup> Aerospace (in Hanoi and Ha Long [Hanwha]), car (Hai Long, Vin Phuc with Toyota) electronics (LG Electronics in Hai Phong, Hoa Lac High Tech Park in Hanoi), biotechnologies (Hanoi), etc.

<sup>7</sup> Such as new ports (Lach Nguyen) airports (Van Don, extended Noi Bai and Cat Bi airports), economic zones (Van Don, Mong Cai, Noi Bai), bridges (Nhat Tan bridge in Hanoi), etc.

<sup>8</sup> e.g. Taiwanese and Korean investments in Ha Nam and Bac Ninh

<sup>9</sup> The highest being VND 160,016 billion (Hai Phong).

<sup>10</sup> For example, the rare-earth extracted in Lai Chau are exported to Japan.

<sup>11</sup> Nghi Son refinery plant under construction, construction of the iron and steel plant by Formosa Ha Tinh Corp

<sup>12</sup> Shipbuilding and petrochemicals, besides tourism

<sup>13</sup> In 2019, their urban population was, respectively, 502,000 and 409,000

<sup>14</sup> Yet, in 2019, the GDP for industrial and construction sector in HCMC, around VND 255,821 billion, still exceeds each of these three provincial GDPs.

**Economic Evolutions in Brief**

pollutions. In terms of GRDP, Binh Phuoc and Tay Ninh lag far behind the four other provinces. Their economy still largely depend on the primary sector (32% and 27% respectively in 2019). But even there, industrialization is emerging: in Binh Phuoc for example, the AAGR of industry and construction exceeded 10% over the last decade.

**Mekong River Delta.** The average growth of GRDP is estimated at 5% over the period 2010–2019 period. Agriculture, aquaculture, and fishery dominate (above 30% of the production in 10 provinces) and family business-based service sector (commerce, accommodation, restaurants) generate also important revenues. In 2019, provincial AAGRs often remain lower than in many other regions in Vietnam (less than 5% for seven of the 14 provinces of the Mekong Delta region). Presently, the most industrialized provinces are Long An, (followed by Can Tho and Tien Giang). Agri-industry and garments dominate the industry. Economic data do not provide evidence that Can Tho was delivered the full economic advantages of its urbanization; In 2019, its GDP (VND51,003,000 billion) ranked behind those of Long An, Kien Giang, and Tien Giang. The most important regional challenge is certainly to counter or adapt to saline intrusions, droughts, floods, it is essential to secure residents' access to water and mobility (intermittent road accessibility affected by floods). Although the deltaic topography should make it costly, securing connectivity within the region (and northward) by developing appropriate land use planning and infrastructure (including green infrastructure). Other economic challenges of the region are its capacities to attract investments in sectors of excellence, and to reduce out-migrations (in particular skilled manpower).

Source: JST

付録 2.3: FEZ 別の人口と GRDP (シナリオ B)

Focal Economic Zones	Nb	Provinces	Population				GRDP					
			2010	2020	2030	2050	2019	2020	2030	AAGR 20-30	2050	AAGR 30-50
Northern Focal Economic Zone	1	Hanoi	6589	8150	8707	9123	582767	599667	1163785	6%	3002843	5%
	2	Hung Yen	1138	1264	1338	1404	50798	52271	105815	7%	295794	5%
	3	Hai Phong	1858	2044	2149	2244	160016	164656	439731	9%	1265657	5%
	4	Quang Ninh	1155	1333	1412	1493	101995	52271	105815	7%	295794	5%
	5	Hai Duong	1713	1906	1989	2021	73925	76069	134446	5%	351419	5%
	6	Ha Tay (now Hanoi)	0	0	0	0	0	0	0	0%	0	0%
	7	Bac Ninh	1041	1393	1532	1649	115626	118979	247675	7%	662765	5%
	8	Vinh Phuc	1008	1163	1240	1333	57465	59131	109838	6%	271488	4%
<b>Total</b>			<b>14501</b>	<b>17251</b>	<b>18368</b>	<b>19267</b>	<b>1142591</b>	<b>1123044</b>	<b>2307104</b>	<b>7%</b>	<b>6145760</b>	<b>5%</b>
Middle Part Focal Economic Zone	1	Thua Thien Hue	1091	1139	1228	1315	28705	29537	50081	5%	172173	6%
	2	Danang	927	1153	1278	1400	61187	62961	147313	8%	818763	9%
	3	Quang Nam	1427	1507	1597	1672	58107	59792	116893	6%	432914	6%
	4	Quang Ngai	1219	1238	1293	1337	42914	44159	87814	6%	327759	6%
	5	Binh Dinh	1492	1496	1579	1678	45791	47119	86130	6%	259575	5%
<b>Total</b>			<b>6155</b>	<b>6533</b>	<b>6974</b>	<b>7401</b>	<b>236704</b>	<b>243569</b>	<b>488230</b>	<b>7%</b>	<b>2011183</b>	<b>7%</b>
Southern Focal Economic Zone	1	HCMC	7378	9108	9787	10149	852738	877467	1952022	8%	4679844	4%
	2	Binh Duong	1620	2502	2991	3379	228912	235550	763805	11%	1927908	5%
	3	Ba Ria Vung Tau	1012	1161	1247	1318	231425	238136	419323	5%	1056613	4%
	4	Dong Nai	2575	3143	3442	3701	187782	193227	462760	8%	1220907	5%
	5	Tay Ninh	1073	1178	1234	1261	46614	47966	98964	7%	258002	5%
	6	Binh Phuoc	888	1009	1118	1240	38427	39542	81665	7%	209423	5%
	7	Long An	1443	1695	1790	1848	71063	73124	160918	7%	552662	6%
	8	Tien Giang	1678	1773	1842	1872	56442	58079	105931	6%	335996	6%
<b>Total</b>			<b>17667</b>	<b>21568</b>	<b>23451</b>	<b>24768</b>	<b>1713404</b>	<b>1763092</b>	<b>4045389</b>	<b>8%</b>	<b>10241354</b>	<b>5%</b>
Mekong River Delta Focal Economic Zone	1	Can Tho	1195	1244	1324	1385	51003	52482	110973	7%	483344	7%
	2	An Giang	2149	1918	2029	2129	50602	52069	87433	5%	242369	5%
	3	Kien Giang	1700	1736	1853	1952	57431	59096	94434	4%	286651	5%
	4	Ca Mau	1210	1199	1246	1277	39453	40597	74883	6%	170640	4%
<b>Total</b>			<b>6254</b>	<b>6096</b>	<b>6451</b>	<b>6743</b>	<b>198489</b>	<b>204245</b>	<b>367723</b>	<b>5%</b>	<b>1183004</b>	<b>6%</b>
<b>Grand Total Focal Economic Zones</b>			<b>44577</b>	<b>51448</b>	<b>55244</b>	<b>58179</b>	<b>3291188</b>	<b>3333950</b>	<b>7208446</b>	<b>7%</b>	<b>19581300</b>	<b>5%</b>

Source: JST



## 付録 2.4: 2025 年までベトナム人口成長

Level 1 Provinces	Population in 000'	Population in 000'	Population in 000'		% Urban Population		AARG Population		AARG Urban Population	
	2020	2030	2050	2020	2030	2050	2020-2030	2030-2050	2020-2030	2030-2050
T.P.Ha Noi	8150	8707	9123	49%	76%	80%	0.6%	0.22%	4.6%	0.47%
Vinh Phuc	1163	1240	1333	26%	40%	50%	0.6%	0.34%	4.8%	1.41%
Bac Ninh	1393	1532	1649	28%	50%	60%	0.9%	0.35%	6.5%	1.23%
Quang Ninh	1333	1412	1493	64%	76%	80%	0.5%	0.27%	2.0%	0.51%
Hai Duong	1906	1989	2021	31%	77%	80%	0.4%	0.08%	8.9%	0.26%
T.P. Hai Phong	2044	2149	2244	46%	75%	80%	0.5%	0.21%	5.1%	0.51%
Hung Yen	1264	1338	1404	17%	30%	35%	0.5%	0.23%	6.1%	0.97%
Thai Binh	1864	1878	1857	11%	20%	25%	0.1%	-0.05%	6.0%	1.01%
Ha Nam	857	885	897	17%	30%	35%	0.3%	0.07%	5.7%	0.80%
Nam Dinh	1789	1868	1923	18%	25%	50%	0.4%	0.14%	3.3%	3.50%
Ninh Binh	988	1021	1045	21%	25%	50%	0.3%	0.11%	1.9%	3.47%
<b>Region RRD</b>	<b>22749</b>	<b>24020</b>	<b>24990</b>	<b>36%</b>	<b>58%</b>	<b>65%</b>	<b>0.5%</b>	<b>0.19%</b>	<b>4.9%</b>	<b>0.78%</b>
Ha Giang	868	967	1091	16%	38%	40%	1.0%	0.58%	9.3%	0.82%
Cao Bang	535	571	614	23%	45%	50%	0.6%	0.35%	6.7%	0.85%
Bac Kan	316	333	347	21%	25%	30%	0.5%	0.19%	2.2%	1.07%
Tuyen Quang	790	836	891	14%	40%	50%	0.5%	0.31%	10.7%	1.38%
Lao Cai	741	820	906	23%	40%	50%	0.9%	0.48%	6.0%	1.55%
Yen Bai	829	887	962	20%	25%	35%	0.6%	0.39%	2.8%	2.01%
Thai Nguyen	1299	1381	1456	32%	50%	60%	0.6%	0.25%	4.7%	1.13%
Lang Son	787	829	862	20%	45%	50%	0.5%	0.18%	7.9%	0.69%
Bac Giang	1821	1933	2023	11%	40%	50%	0.5%	0.22%	12.6%	1.29%
Phu Tho	1473	1543	1617	18%	25%	40%	0.4%	0.22%	3.3%	2.49%
Dien Bien Phu	609	689	787	14%	40%	45%	1.1%	0.64%	11.0%	1.20%
Lai Chau	469	539	623	15%	25%	30%	1.3%	0.69%	6.3%	1.57%
Son La	1267	1413	1588	14%	25%	30%	1.0%	0.56%	6.6%	1.43%
Hoa Binh	861	907	947	16%	30%	30%	0.5%	0.21%	6.5%	0.21%
<b>Region NMM</b>	<b>12665</b>	<b>13647</b>	<b>14714</b>	<b>18%</b>	<b>36%</b>	<b>43%</b>	<b>0.7%</b>	<b>0.36%</b>	<b>7.0%</b>	<b>1.29%</b>
Thanh Hoa	3660	3792	3849	15%	50%	55%	0.3%	0.07%	11.9%	0.53%
NgheAn	3375	3763	4154	15%	45%	50%	1.0%	0.47%	11.8%	0.98%
Ha Tinh	1298	1379	1496	20%	25%	30%	0.6%	0.39%	2.8%	1.26%
Quang Binh	904	973	1046	21%	25%	30%	0.7%	0.35%	2.3%	1.22%
Quang Tri	637	678	737	31%	35%	40%	0.6%	0.40%	1.7%	1.04%
Thua Thien-Hue	1139	1228	1315	50%	65%	70%	0.7%	0.33%	3.1%	0.68%
TP. Da Nang	1153	1278	1400	87%	95%	97%	0.9%	0.44%	1.7%	0.53%
Quang Nam	1507	1597	1672	25%	45%	55%	0.5%	0.22%	5.9%	1.18%
Quang Ngai	1238	1293	1337	16%	25%	30%	0.4%	0.16%	4.3%	1.03%
Binh Dinh	1496	1579	1678	32%	35%	40%	0.5%	0.29%	1.3%	0.93%
Phu Yen	877	922	959	29%	30%	35%	0.5%	0.19%	0.8%	0.93%
Khanh Hoa	1241	1316	1370	42%	53%	55%	0.5%	0.19%	2.6%	0.37%
Ninh Thuan	596	648	701	36%	40%	55%	0.8%	0.37%	1.8%	1.91%
Binh Thuan	1242	1339	1421	38%	45%	50%	0.7%	0.28%	2.2%	0.79%
<b>Region NCCCA</b>	<b>20362</b>	<b>21785</b>	<b>23135</b>	<b>28%</b>	<b>45%</b>	<b>51%</b>	<b>0.6%</b>	<b>0.29%</b>	<b>5.0%</b>	<b>0.82%</b>
Kon Tum	550	620	703	32%	35%	40%	1.1%	0.60%	1.9%	1.24%
Gia Lai	1537	1712	1903	29%	35%	40%	1.0%	0.51%	2.7%	1.15%
Dak Lak	1894	2113	2322	25%	50%	55%	1.0%	0.45%	7.7%	0.91%
Dak Nong	632	699	780	15%	35%	40%	0.9%	0.52%	8.8%	1.16%
Lam Dong	1311	1439	1581	39%	45%	50%	0.8%	0.45%	2.1%	0.95%
<b>Region Central Highlands</b>	<b>5924</b>	<b>6583</b>	<b>7289</b>	<b>29%</b>	<b>42%</b>	<b>47%</b>	<b>1.0%</b>	<b>0.49%</b>	<b>4.5%</b>	<b>1.02%</b>
Binh Phuoc	1009	1118	1240	24%	35%	40%	0.9%	0.50%	4.5%	1.14%
Tay Ninh	1178	1234	1261	18%	28%	35%	0.4%	0.10%	4.7%	1.17%
Binh Duong	2502	2991	3379	80%	87%	90%	1.6%	0.58%	2.4%	0.74%
Dong Nai	3143	3442	3701	44%	55%	60%	0.8%	0.35%	2.9%	0.76%
Ba Ria-Vung Tau	1161	1247	1318	59%	67%	70%	0.7%	0.26%	1.9%	0.47%
T.P. Ho Chi Minh	9108	9787	10149	79%	88%	90%	0.7%	0.17%	1.6%	0.28%
<b>Region Southeast</b>	<b>18100</b>	<b>19819</b>	<b>21048</b>	<b>65%</b>	<b>74%</b>	<b>77%</b>	<b>0.8%</b>	<b>0.29%</b>	<b>2.1%</b>	<b>0.49%</b>
Long An	1695	1790	1848	16%	35%	40%	0.5%	0.15%	7.9%	0.79%
Tien Giang	1773	1842	1872	14%	30%	35%	0.3%	0.08%	7.5%	0.81%
Ben Tre	1293	1327	1336	10%	20%	25%	0.2%	0.03%	7.0%	1.10%

Level 1 Provinces	Population in 000'	Population in 000'	Population in 000'		% Urban Population		AARG Population		AARG Urban Population	
	2020	2030	2050	2020	2030	2050	2020-2030	2030-2050	2020-2030	2030-2050
Tra Vinh	1014	1059	1087	17%	25%	30%	0.4%	0.12%	3.8%	1.00%
Vinh Long	1027	1068	1081	17%	25%	30%	0.4%	0.06%	4.2%	0.93%
Dong Thap	1607	1690	1735	19%	25%	30%	0.5%	0.13%	3.0%	1.00%
An Giang	1918	2029	2129	32%	33%	35%	0.5%	0.23%	0.9%	0.51%
Kien Giang	1736	1853	1952	28%	32%	35%	0.6%	0.25%	1.7%	0.68%
Can Tho	1244	1324	1385	70%	80%	85%	0.6%	0.21%	1.8%	0.50%
Hau Giang	734	755	756	27%	32%	35%	0.3%	0.01%	1.8%	0.44%
Soc Trang	1204	1251	1272	32%	35%	40%	0.4%	0.08%	1.1%	0.72%
Bac Lieu	912	955	966	28%	30%	35%	0.4%	0.06%	1.1%	0.79%
Ca Mau	1199	1246	1277	23%	25%	30%	0.4%	0.12%	1.2%	0.99%
<b>Region MRD</b>	<b>17356</b>	<b>18188</b>	<b>18698</b>	<b>25%</b>	<b>33%</b>	<b>37%</b>	<b>0.4%</b>	<b>0.13%</b>	<b>2.9%</b>	<b>0.74%</b>
<b>National</b>	<b>97155</b>	<b>104043</b>	<b>109873</b>	<b>35%</b>	<b>50%</b>	<b>56%</b>	<b>0.6%</b>	<b>0.26%</b>	<b>3.9%</b>	<b>0.77%</b>

Source: JST

付録 2.5: 2025 年までベトナム経済成長

Level 2 Regions	Level 1 Provinces	AG/Year Assumed 2020–2030	AG/Year Assumed 2030–2050	GRDP VND Billion			Sector Share %								
							2020			2030			2050		
				2020	2030	2050	1	2	3	1	2	3	1	2	3
Red River Delta	T.P.Ha Noi	6%	5%	599667	1163785	3002843	2%	25%	72%	2%	20%	78%	1%	14%	85%
	Vinh Phuc	6%	4%	59131	109838	271488	8%	64%	28%	6%	66%	29%	4%	60%	36%
	Bac Ninh	7%	5%	118979	247675	662765	3%	78%	19%	2%	79%	19%	1%	74%	25%
	Quang Ninh	8%	6%	104953	243232	753671	6%	56%	38%	6%	56%	38%	3%	46%	51%
	Hai Duong	5%	5%	76069	134446	351419	11%	57%	32%	8%	62%	31%	4%	60%	36%
	T.P. Hai Phong	9%	5%	164656	439731	1265657	4%	53%	43%	2%	56%	41%	2%	45%	54%
	Hung Yen	7%	5%	52271	105815	295794	11%	62%	26%	8%	65%	27%	5%	65%	30%
	Thai Binh	5%	5%	49554	84465	216006	26%	41%	33%	21%	46%	33%	19%	46%	36%
	Ha Nam	7%	5%	33436	73774	205502	11%	61%	28%	7%	71%	22%	5%	71%	24%
	Nam Dinh	5%	4%	43780	76421	190803	22%	41%	38%	17%	40%	43%	16%	36%	48%
Ninh Binh	5%	4%	33626	58829	145463	13%	44%	43%	10%	43%	47%	8%	40%	52%	
<b>Sub-total</b>	<b>Region RRD</b>	<b>7%</b>	<b>5%</b>	<b>1336123</b>	<b>2738009</b>	<b>7361411</b>	<b>6%</b>	<b>43%</b>	<b>51%</b>	<b>4%</b>	<b>43%</b>	<b>53%</b>	<b>3%</b>	<b>38%</b>	<b>59%</b>
Northern Midlands and Mountains	Ha Giang	6%	5%	13554	25346	70155	32%	25%	42%	27%	26%	48%	24%	17%	58%
	Cao Bang	6%	5%	10685	20116	59382	23%	24%	53%	19%	22%	60%	17%	14%	69%
	Bac Kan	5%	5%	7161	12612	33224	29%	17%	54%	26%	16%	58%	25%	14%	61%
	Tuyen Quang	7%	5%	20188	40554	119435	24%	33%	42%	21%	35%	44%	18%	40%	42%
	Lao Cai	7%	6%	27607	58793	190119	15%	43%	42%	11%	42%	46%	10%	37%	54%
	Yen Bai	6%	5%	17038	30842	80457	25%	30%	45%	29%	28%	43%	38%	24%	37%
	Thai Nguyen	7%	6%	67909	142905	500908	11%	62%	27%	8%	62%	30%	8%	60%	32%
	Lang Son	7%	5%	18499	37145	114272	22%	26%	52%	15%	25%	60%	11%	22%	66%
	Bac Giang	9%	6%	72487	181863	621862	15%	64%	21%	11%	73%	16%	10%	72%	17%
	Phu Tho	5%	6%	41963	75016	233189	20%	41%	39%	19%	44%	38%	19%	48%	34%
	Dien Bien Phu	7%	5%	11362	22960	67714	19%	22%	59%	18%	20%	62%	23%	13%	64%
	Lai Chau	7%	5%	11184	23328	60348	16%	43%	41%	15%	48%	37%	21%	35%	44%
	Son La	5%	5%	27698	47255	144061	27%	32%	41%	30%	29%	41%	37%	22%	41%
Hoa Binh	6%	6%	29307	57964	184945	27%	32%	41%	29%	28%	43%	34%	24%	42%	
<b>Sub-total</b>	<b>Region NMM</b>	<b>7%</b>	<b>6%</b>	<b>376644</b>	<b>776698</b>	<b>2480072</b>	<b>19%</b>	<b>44%</b>	<b>36%</b>	<b>16%</b>	<b>48%</b>	<b>36%</b>	<b>16%</b>	<b>47%</b>	<b>37%</b>
North Central and Central Coastal Areas	Thanh Hoa	7%	6%	94624	192527	694619	18%	43%	39%	15%	45%	41%	12%	42%	46%
	NghéAn	6%	6%	79918	155831	567568	23%	32%	46%	20%	31%	49%	15%	29%	56%
	Ha Tinh	7%	6%	44701	93050	297082	14%	49%	37%	12%	54%	34%	13%	58%	29%
	Quang Binh	5%	5%	23615	39337	109730	20%	26%	54%	21%	24%	55%	25%	20%	55%
	Quang Tri	5%	6%	18817	31374	110921	23%	25%	52%	23%	23%	53%	22%	15%	63%
	Thua Thien-Hue	5%	6%	29537	50081	172173	13%	35%	52%	13%	28%	59%	10%	19%	71%
	TP. Da Nang	8%	9%	62961	147313	818763	2%	25%	73%	1%	18%	80%	1%	11%	88%
	Quang Nam	6%	6%	59792	116893	432914	12%	50%	38%	10%	49%	41%	9%	45%	46%
	Quang Ngai	6%	6%	44159	87814	327759	20%	45%	35%	18%	53%	30%	14%	58%	27%
	Binh Dinh	6%	5%	47119	86130	259575	29%	29%	42%	27%	24%	49%	28%	27%	45%
	Phu Yen	5%	5%	25241	41867	113948	26%	30%	44%	27%	28%	45%	30%	23%	46%
	Khanh Hoa	5%	7%	48221	86628	387803	11%	31%	58%	11%	21%	68%	7%	16%	76%
	Ninh Thuan	6%	5%	16910	33199	91070	36%	25%	39%	31%	26%	42%	35%	22%	43%
Binh Thuan	5%	5%	42059	69781	208210	31%	30%	39%	32%	28%	40%	33%	21%	45%	
<b>Sub-total</b>	<b>Region NCCA</b>	<b>6%</b>	<b>6%</b>	<b>637674</b>	<b>1231824</b>	<b>4592135</b>	<b>18%</b>	<b>36%</b>	<b>46%</b>	<b>16%</b>	<b>35%</b>	<b>56%</b>	<b>13%</b>	<b>30%</b>	<b>56%</b>
Central Highlands	Kon Tum	6%	7%	13449	25727	97199	23%	28%	49%	20%	31%	49%	22%	34%	44%
	Gia Lai	5%	6%	38613	67561	209910	31%	25%	44%	30%	22%	48%	33%	24%	43%
	Dak Lak	6%	6%	46755	90782	308620	38%	15%	47%	37%	12%	51%	37%	12%	51%
	Dak Nong	6%	6%	17929	32963	103304	41%	17%	42%	43%	14%	43%	46%	15%	38%
	Lam Dong	6%	7%	46963	85725	326964	37%	20%	42%	39%	17%	44%	42%	19%	39%
<b>Sub-total</b>	<b>Region Central Highlands</b>	<b>6%</b>	<b>6%</b>	<b>163708</b>	<b>302758</b>	<b>1045997</b>	<b>35%</b>	<b>20%</b>	<b>45%</b>	<b>35%</b>	<b>17%</b>	<b>47%</b>	<b>37%</b>	<b>19%</b>	<b>44%</b>
Southeast	Binh Phuoc	7%	5%	39542	81665	209423	32%	30%	38%	24%	37%	39%	17%	41%	42%
	Tay Ninh	7%	5%	47966	98964	258002	27%	40%	33%	16%	50%	34%	10%	53%	36%
	Binh Duong	11%	5%	235550	763805	1927908	3%	75%	22%	3%	80%	17%	2%	72%	26%
	Dong Nai	8%	5%	193227	462760	1220907	11%	64%	25%	11%	62%	27%	7%	54%	39%
	Ba Ria-Vung Tau	5%	4%	238136	419323	1056613	4%	82%	14%	3%	79%	17%	3%	72%	26%
T.P. Ho Chi Minh	8%	4%	877467	1952022	4679844	1%	29%	70%	0%	18%	82%	0%	14%	86%	
<b>Sub-total</b>	<b>Region Southeast</b>	<b>8%</b>	<b>4%</b>	<b>1631889</b>	<b>3778540</b>	<b>9352696</b>	<b>4%</b>	<b>48%</b>	<b>48%</b>	<b>3%</b>	<b>44%</b>	<b>53%</b>	<b>2%</b>	<b>39%</b>	<b>58%</b>
	Long An	7%	6%	73124	160918	552662	18%	53%	29%	10%	62%	28%	8%	61%	30%

Level 2 Regions	Level 1 Provinces	AG/Year Assumed 2020- 2030	AG/Year Assumed 2030- 2050	GRDP VND Billion			Sector Share %								
							2020			2030			2050		
				2020	2030	2050	1	2	3	1	2	3	1	2	3
Mekong River Delta	Tien Giang	6%	6%	58079	105931	335996	40%	30%	30%	37%	32%	31%	33%	34%	33%
	Ben Tre	4%	5%	33264	52117	137459	33%	21%	46%	29%	20%	50%	25%	22%	53%
	Tra Vinh	7%	5%	37593	78797	235370	33%	39%	29%	24%	53%	23%	18%	60%	22%
	Vinh Long	4%	4%	31826	48995	116814	34%	21%	45%	34%	21%	45%	33%	24%	43%
	Dong Thap	5%	5%	51419	86059	237035	37%	25%	38%	42%	23%	35%	52%	19%	29%
	An Giang	5%	5%	52069	87433	242369	39%	15%	46%	44%	14%	42%	54%	11%	35%
	Kien Giang	4%	5%	59096	94434	286651	43%	23%	34%	41%	22%	37%	46%	17%	37%
	Can Tho	7%	7%	52482	110973	483344	12%	37%	51%	8%	50%	42%	4%	48%	48%
	Hau Giang	5%	5%	21678	35657	99339	29%	27%	44%	34%	25%	41%	34%	25%	41%
	Soc Trang	4%	4%	34160	52587	119834	48%	16%	36%	48%	16%	36%	48%	16%	36%
	Bac Lieu	5%	4%	26217	44209	100742	48%	18%	34%	48%	21%	31%	48%	21%	31%
Ca Mau	6%	4%	40597	74883	170640	32%	39%	29%	41%	32%	27%	41%	32%	27%	
<b>Sub-total</b>	<b>Region MRD</b>	<b>6%</b>	<b>5%</b>	<b>571605</b>	<b>1032994</b>	<b>3118255</b>	<b>33%</b>	<b>30%</b>	<b>37%</b>	<b>31%</b>	<b>34%</b>	<b>35%</b>	<b>29%</b>	<b>36%</b>	<b>35%</b>
<b>Total</b>	<b>National</b>	<b>7%</b>	<b>5%</b>	<b>4717643</b>	<b>9860823</b>	<b>27950565</b>	<b>12%</b>	<b>41%</b>	<b>46%</b>	<b>10%</b>	<b>41%</b>	<b>49%</b>	<b>10%</b>	<b>37%</b>	<b>53%</b>

Source: JST

## 付録 2.6: 2章の引用文献

1. Asian Productivity Organization, APO Databook 2019, p. 46, 47 and 51
2. Central Committee of the Communist Party of Vietnam, 2018, Resolution No. 36-NQ/TW, dated 22 October 2018 on the strategy for the sustainable development of Viet Nam's marine economy by 2030, with a vision to 2045. According to this resolution, and by 2030, sea-based industries will contribute about 10% of the NGP and the 28 coastal provinces and cities will make up 65-70% of the country's GDP. The resolution includes priorities of the marine economy by socio-economic regions.
3. General Statistic Office, United Nations Population Fund, 2014, Migration and Urbanization in Vietnam - The 2014 Viet Nam Intercensal Population and Housing Survey, 79 p.
4. General Statistic Office, UNFPA - United Nations Population Fund, 2016, Vietnam Population Projection 2014–2049, 247 p
5. General Statistic Office, 2020, Socio-Economic Statistical Data of 63 Provinces and Cities, 1064 p.
6. General Statistic Office, 2010–2020, Statistical Yearbooks 2010 up to 2019.
7. Government of Vietnam, 2017, Resolution 120 /NQ-CP on Sustainable and Climate-Resilient Development of the Mekong Delta of Viet Nam, dated November 17, 2017.
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10. IMF, 2018 Vietnam - Selected Issues, Country report No 18/216, July 2018, 35 p. In particular due to “increasing FDI inflows, the declining share of employment in agriculture, declining credit to SOEs and increasing domestic private investment” (p 8).
11. International Monetary Fund, 2020, World Economic Outlook A Long and Difficult Ascent, October.
12. International Monetary Fund, 2020, Data Mapper October.
13. International Monetary Fund, 2021, IMF Country Report No 21/42 Vietnam, March, 77 p.
14. Ministry of Industry and Trade, 2018, Vietnam National Energy Efficiency Program 2020-2030, June, 104 p.- Approved by Prime Minister Decision 280/QD-TTg (dated 13th March 2019). The program targets energy conservation and efficiency objectives for industrial and non-industrial sectors in a green growth perspective.
15. Ministry of Industry and Trade, 2020, National Action Plan on Sustainable Consumption and Production, 25 p. - approved by Prime Minister Decision 889-QD-TTg (dated 24th June 2020). The action plan insists on reduction on natural resources and materials used for production, packaging and awareness raising.
16. Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development, Dutch Government, 2013, Mekong Delta Plan, Long-term Vision and Strategy for a Safe, Prosperous and Sustainable Delta, 126 p.
17. Ministry of Science and Technology, Austrian Aid, 2019, Vietnam Future's Digital Economy,

Towards 2030 and 2045, May, 158 p. In particular for digitalization of the economy. The four scenarios by 2030 and by 2050 (the first figure is the estimated contribution to the GDP, and the second is the estimated share of current jobs at risk of disruption) are: (i) Heritage (0.38%, 18.4%); (ii) Digitally Transformed (1.1%, 38.1%); (iii) Digital Exporter (0.45%, 19.1%); and (iv) Digital Consumer (0.63%, 28.9%). Scenario B would rather fit with the Digital Transformed scenario by 2045 (pages 90–95 of the report)

18. Politburo of the Communist Party of Vietnam, 2018, Resolution No. 23-NQ/TW on Orientation to Develop National Industrial Development Policy to 2030, vision to 2045. In particular, the Resolution highlights the importance of spatial distribution of industries to be “not evenly distributed according to administrative boundaries” within regions and provinces (Section III.1.)
19. Politburo of the Communist Party of Vietnam, 2020, Resolution No. 59-NQ/TW dated August 5, 2020 on construction and development of Can Tho city to 2030, vision to 2045
20. PWC, 2017, The Long View: How Will the Global Economic Order Change by 2050? 72 p. According to PWC, Vietnam is expected to make the biggest leap forward in terms of economic growth by 2050 compared with other countries. In terms of purchasing power parity, from the 32d position in 2016, it would reach the 20th rank and show an AAGR of GDP estimated at 5.1.
21. World Bank, Ministry of Planning and Investments, 2016, Vietnam 2035 Toward Prosperity Creativity Equity and Democracy, 368 p. In particular for general economic development.
22. World Bank, 2017, Vietnam at a Crossroads Engaging in the Next Generation of Global Value Chain, 212 p. In particular for perspectives regarding industries and value chains.
23. World Bank, 2019, Vietnam Development Report, Connecting Vietnam for Growth and Prosperity, December, December, 149 p. In particular for perspectives regarding industries and value chains.
24. World Bank, 2020, What Will be the New Normal for Vietnam? The Economic Impact of COVID-19, July, 52 p.
25. World Bank, 2020, Macro Poverty Outlook, East Asia and the Pacific Country by Country Analysis and Projections for the Developing World, October.

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## 付録 5.1: 交通機関の制度的枠組み

S/T	Name of Document	Date Issued	Contents	Notes
<b>General</b>				
01	61/2020/QH14	17/05/2020	Law on Investment	
02	39/2019/QH14	13/6/2019	Law on Public Investment	
03	59/2020/QH14	17/06/2020	Law on Enterprises	
04	47/2021/ND-CP	01/04/2021	Elaborate of some articles of Law on Enterprises	
05	23/2012/QH13	20/11/2012	Cooperative Law	
06	43/2013/QH13 12/VBHN-VPQH	26/11/2013 04/7/2019	Law on Tendering	
07	27/2004/QH11	03/12/2004	Competition Law	
08	50/2014/QH13 62/2020/QH14	18/06/2014 17/6/2020	Construction Law	
09	69/2014/QH13	26/11/2014	Law on management and use of state capital invested in production and business in enterprises.	
10	04/VBHN-BTC	10/5/2021	Decree on investment of State capital in enterprises and management and use of capital and assets in enterprises.	
11	131/2018/ND-CP	29/9/2018	Functions, tasks, powers and organizational structure of the Commission for the Management of State Capital at enterprises (CMSC)	
12	11/2012/QH13	20/6/2012	Price Law	
13	97/2015/QH13	25/11/2015	Law on Fees and Charges	
14	31/2021/ND-CP	26/03/2021	Elaboration of some articles of the Law on Investment	
15	21/2017/QH14	24/11/2017	Law on Planning	
16	37/2019/ND-CP	07/5/2019	Decree on Elaboration some articles of the Law on Planning	
17	64/2020/QH14	18/6/2020	Law on Public – Private Partnership Investment (PPP)	
18	35/2021/ND-CP	29/3/2021	Decree on Elaboration some articles of the Law on Public – Private Partnership Investment (PPP)	
19	28/2021/ND-CP	26/3/2021	Financial management of Public-Private Partnership (PPP) projects	
20	15/2017/QH14	21/06/2017	Law on Management and use of public property.	
21	707/QD-TTg	25/5/2017	Restructuring state-owned enterprises with particular attention paid to state-owned economic group corporations for the 2016–2020	
22	58/2016/QD-TTg	28/12/2016	Criteria for classification of wholly state-owned enterprises, partially state-owned enterprises and list of state-owned enterprises undergoing restructuring in 2016–2020.	

STT	Name of Document	Date Issued	Contents	Notes
23	908/QD-TTg	29/6/2020	List of partially state-owned enterprises undergoing divestment until the end 2020.	
<b>Ministry of Transport, Department of Transport, Inland Ports, Multimodal Transport</b>				
24	12/2017/ND-CP	10/2/2017	Functions, tasks, powers and organizational structure of the Ministry of Transport	
25	42/2015/TTLT-BGTVT-BNV	14/8/2015	Guide on the Function, Duty, Authority, and Organization Structure of Transport Professional Body in People's Committee of Province, Municipalities, and People's Committee of Rural District, Urban District, Town, and Provincial City	
26	57/2013/ND-CP	31/5/2013	Organization and Operation of Transport Inspector	
27	64/2013/TT-BGTVT	31/12/2013	Establishment, Duty, and power of The General Staff on Transport Inspector.	
28	07/VBHN-BGTVT	15/12/2016	Process on Specialized Inspector; Sanction on Administrative Violation; Planning, Reporting, and Internal Management of Transport Inspector	
29	3177/QD-BGTVT	20/8/2014	Action Plan on the Implementation of the Transport Sector's Restructuring Project According to Decision No 12/10/QD-TTg	
30	167/QD-TTg	07/2/2017	Scheme on the Infrastructure Development Synchronization, along with the Local Infrastructure Development and the Regional Integration's Infrastructure Network Policy.	
31	1201/QD0BGTVT	11/6/2018	Detailed Planning on the Development of Vietnam's Inland Port through 2020, with Direction for 2030	
32	2223/QD-TTg 2072/QD-TTg	13/12/2011 12/12/2017	Detailed Planning on the Development of Vietnam's Inland Port through 2020, with Direction for 2030. Adjustment on the Development Planning of Vietnam's Inland Port System through 2020, with Direction for 2030.	
33	47/2014/QD-TTg	27/8/2014	Regulation on Operation Management of Inland Port	
34	26/2015/TT-BGTVT	22/6/2015	Guide on the Implementation of Regulation on Operation Management of Inland Port's Articles, issued along with Decision 47/2014/QD-TTg on 27/8/2014 by the Prime Minister	
35	38/2017/ND-CP	04/4/2017	Investment on Construction, Management, and Exploitation of Inland Port.	
36	104/1/QD-BGTVT	28/5/2020	Announcement of Vietnam's Inland Port List.	
37	169/QD-TTg	22/01/2014	Logistics Services Development Project of the Transport Sector through 2020, with Direction for 2030	
38	21/CT-TTg	18/7/2018	Promoting Solutions to Reduce Logistics Costs and Improve Transport Infrastructure Efficiency	
39	187/2009/ND-CP 89/2011/ND-CP 144/2018/ND-CP 03/VBHN-BGTVT	19/10/2009 10/10/2011 16/10/2018 31/01/2019	Regarding Multimodal Transport Amendment and Supplementation of Decree 187/2009/ND-CP's Articles Amendment and Supplementation of Decree 187/2009/ND-CP Regarding Multimodal Transport Decree on Multimodal Transport	
40	412/QD-TTg	11/4/2007	List of Some Essential Traffic Infrastructure Project's Investments through 2020	
41	318/QD-TTg	04/3/2014	Approval of the Strategy to Develop Transport Services through 2020, with a Direction for 2030	



STT	Name of Document	Date Issued	Contents	Notes
42	355/QD-TTg	25/02/2013	Adjustment on the Strategy to Develop Transport Services through 2020, with a Direction for 2030	
43	2490/BGTVT-VT	10/03/2016	Coordinated Direction on the Launch of Transport Exchange to improve Transport Operation Efficiency	
44	703/QD-TTg	7/6/2019	Building a Competitive Transport Market with the aim of Multimodal Transportation, joining between Different Transportation Methods, focusing on the Implementation of Information Technology to Reduce the Transportation Cost, which will Facilitate Business' Circulation of Goods Distribution and Services" Project.	
45	19/2019/TT-BGTVT	23/5/2019	Detailed Instruction on the Investment and the Content of the Report regarding the Achievability of Transport Sector's Public-Private Investment Project.	
46	208/QD-TTg 1310/QD-TTg	03/02/2016 26/8/2020	Planning of Public Non-Business Unit Network under the Ministry of Transport through 2020, with a Direction for 2030. Amendment and Supplement for Decision 208/QD-TTg	
47	1038/QD-BGTVT	27/5/2020	Decentralization of the Management in Construction Investment Project using the Public Investment Fund Managed by the Ministry of Transport	
<b>Road</b>				
48	35/2018/QD-BGTVT	14/8/2018	Function, Duty, Authority, and Organization Structure of Vietnam Road Administration Department, under the Ministry of Transport.	
49	23/2008/QH11	13/11/2008	Law on Road Traffic	
50	1423/QD-BGTVT	22/4/2015	Approval of the Road Transport Restructuring Project through 2020.	
51	356/QD-TTg	25/02/2013	Adjustment to the Planning of Vietnam Road Transport Development through 2020, with a Direction for 2030.	
52	167/QD-TTg	07/2/2017	Scheme on the Infrastructure Development Synchronization, along with the Local Infrastructure Development and the Regional Integration's Infrastructure Network Policy.	
53	33/2019/ND-CP	23/4/2019	Management, use and operation of road infrastructure assets	
54	37/2018/TT-BGTVT	07/6/2018	Management, operation and maintenance of road construction works	
55	10/2020/ND-CP	17/10/2020	Decree on auto transport business and conditions for auto transport business	
56	356/QD-TTg	25/02/2013	Approving the adjusted planning for road traffic development in VN by 2020 and the orientation towards 2030	
57	45/QD-TTg	10/01/2020	Approval of the Road Network Planning, period 2021-2030, with a Vision towards 2050.	
58	12/2017/TT-BGTVT 38/2019/TT-BGTVT	15/04/2017 08/10/2019	Regulations on training, testing and issuance of road motor vehicle driving licenses	
59	11/VBHN-BGTVT	30/03/2021	Circular on the issuance and use of International Driving Permit (IDP)	
60	10/2020/ND-CP	17/10/2020	Decree on auto transport business and conditions for auto transport business	
61	03/VBHN-BGTVT	06/9/2018	Content Guide on the Management, Exploitation, and Maintenance of Highway Construction Work	

STT	Name of Document	Date Issued	Contents	Notes
62	12/2020/TT-BGTVT		Organization and management of auto transport operations and supporting services for road transport	
<b>Inland Waterways</b>				
63	39/QD-BGTVT	08/01/2018	Function, Duty, Authority, and Organization Structure of Vietnam Inland Waterway Port Authority	
64	83/2015/TT-BGTVT	30/12/2015	Regulation on Organization and Operation of the Inland Waterway Port Authority	
65	537/QD-CDTND	26/8/2015	Function, Duty, and Authority of the Vietnam Inland Waterway Administration North Branch	
66	536/QD-CDTND	26/6/2015	Function, Duty, and Authority of the Vietnam Inland Waterway Administration South Branch	
67	23/2004/QH11 48/2014/QH13	15/6/2004 17/06/2014	Law on Inland Waterway Amendment and Supplement of Law on Inland Waterway Traffic's Articles.	
68	37/CT-TTg	29/9/2020	Regarding Inland Waterway Transport Development and Coastal Transport Using Inland Waterway Vessels	
69	08/2021/ND-CP	28/01/2021	Regulation on the Management of Inland Waterway Operation	
70	01/2019/TT-BGTVT	11/01/2019	Regulation on Management and Maintenance of Inland Waterway Works.	
71	128/2018/ND-CP	24/9/2018	Amendment and Supplement to the Decrees on Conditions for Inland Waterway Business's	
72	4835/QD-BGTVT	22/12/2014	Approval on the Socialization Project to Invest in Inland Waterway Sector's Infrastructure	
73	1385/QD-BGTVT	17/4/2015	Inland Waterway Transport Restructuring Project through 2020.	
74	1017/QD-BGTVT 4360/QD-BGTVT	24/4/2013 10/12/2015	Adjustment to the Master Plan for Vietnam's Inland Waterway Transport Development through 2020, with a Direction for 2030. Amendment and Supplement to the Master Plan for Vietnam's Inland Waterway Transport Development through 2020, with a Direction for 2030	
75	1108/QD-BGTVT	26/4/2013	Approval of the Detail Planning of the Inland Waterway Port Network in the South through 2020, with a Direction for 2030	
76	1112/QD-BGTVT	26/4/2013	Approval of the Detail Planning of the Inland Waterway Port Network in the North through 2020, with a Direction for 2030	
77	44/QD-TTg	10/01/2020	Approval of the Making of the Inland Waterway Infrastructure Planning, period 2021-2030, with a Vision towards 2050.	
78	40/2019/TT-BGTVT	15/10/2019	Test, examination, issuance, reissuance and charge of certificates of competency and qualification of seafarers and operations of inland waterway ships.	
79	39/2019/TT-BGTVT	15/10/2019	Responsibility of the Vessel's Owner, Crew Member, and Steersman to Act Accordingly during the Time of their Services and Maintain the Minimum Safety of the Inland Waterway Vessel.	
80	75/2014/TT-BGTVT	19/12/2014	Regulation on Registration for inland waterway ships.	
81	19/VBHN-BGTVT	29/10/2019	Management of Waterway Transport from Shore to Island in Vietnamese Waters.	
82	08/2020/TT-BGTVT	17/04/2020	National Technical Regulation on Inland Waterway Signal.	
83	09/2017/TT-BGTVT	20/3/2017	National Technical Regulation on Lifting Equipment on Inland Waterway Vessels	

STT	Name of Document	Date Issued	Contents	Notes
84	31/2020/TT-BGTVT	08/12/2020	Price range for ferry service affiliated to national highways invested by central government.	
85	248/2016/TT-BTV	11/11/2016	Rate, Collection Method, Payment, Management and Usage of Fees and Charges Applied at Ports and Landing Stage.	
<b>Maritime</b>				
86	40/2015/QH13	25/11/2015	Maritime Code	
87	2818/QĐ-BGTVT	02/10/2017	Function, Duty, Power and Organization of Vietnam Marine Administration (Vinamarine)	
88	34/2013/TT-BGTVT	15/10/2013	Duty, power and Organization of Vna Marine Department's Inspector	
89	31/2016/TT-BGTVT	31/10/2016	Regulation on Organization and Operation of Maritime Administration.	
90	37/2017/ND-CP 12/VBHN-BGTVT	04/4/2017 25/11/2018	Decree on requirement for seaport operations Consolidate Document on Conditions for Sea Port Operator	
91	160/2016/ND-CP	29/11/2016	Conditions for Sea Transport, Shipping Agency, and Towage Services Business	
92	171/2016/ND-CP 86/2020/ND-CP	27/12/2016 23/7/2020	Registration, deregistration, purchase, sale and building of ships Amendment to Government's Decree No.171/2016/ND-CP	
93	43/2018/ND-CP	12/3/2018	Management, use and operation of maritime infrastructure	
94	70/2013/QĐ-TTg	19/11/2013	Announcement of the Vietnam's Sea Port Classifications List	
95	82/2019/ND-CP	17/11/2019	Decree on Prescribing import and breaking of used ships.	
96	70/2016/ND-CP	01/7/2016	Condition for provision on maritime safety services	
97	11/VBHN-BGTVT	25/12/2018	Condition for Ship Building, Conversion, and Repair Services Business	
98	29/2017/ND-CP	20/3/2017	Conditions for seafarer's training facilities and seafarer's recruitment and placement service providers.	
99	147/2018/ND-CP	24/10/2018	Decree on amendments to some articles of the decrees on business conditions in the maritime field	
100	261/2016/TT-BTC	14/11/2016	Maritime fees, charges and schedule of collection rates of maritime fees and charges.	
101	54/2018/TT-BGTVT	14/11/2018	Charge bracket for pilotage, wharf, dock and mooring buoy utilization, container handling and towage services at Vietnamese seaports	
102	2190/QĐ-TTg	24/12/2009	Approving the Master plan on development of Vietnam's seaport system through 2020, with orientation toward 2030	
103	2367/QĐ-BGTVT	09/7/2016	Approval for detailed Planning for seaports in the North (Group 1) by 2020 and the orientation toward 2030	
104	2368/QĐ-BGTVT	29/7/2016	Approval for detailed Planning for seaports in the North Central Coast (Group 2) by 2020 and the orientation toward 2030	
105	2369/QĐ-BGTVT	29/7/2016	Approval for detailed Planning for seaports in the Middle Central Vietnam (Group 3) by 2020 and the orientation toward 2030	
106	2370/QĐ-BGTVT	29/7/2016	Approval for detailed Planning for seaports in the South Central Coast (Group 4) by 2020 and the orientation toward 2030	

STT	Name of Document	Date Issued	Contents	Notes
			2030	
107	3655/QD-BGTVT	27/12/2017	Approval for detailed Planning for seaports in the Southeast (Group 5) by 2020 and the orientation toward 2030	
108	11/2016/TT-BGTVT	02/6/2016	National Technical Regulation on Ship and Ship Safety Equipment.	
109	1922/QD-TTg	05/7/2013	Approval of the "Decentralization and Socialization of the Repair and Maintenance of Maritimes Infrastructure" Project	
110	4298/QD-BGTVT	25/12/2014	Maritimes Sector Restructuring Project through 2020.	
111	1481/QD-BGTVT	27/4/2015	Sea Transport Restructuring Project through 2020.	
112	1517/QD-TTg	26/8/2014	Master Plan on the Development of Vietnam's Sea Transport through 2020, with a Vision towards 2030	
113	1037/QD-TTg	24/6/2014	Adjustment of the Master Plan on the Development of Vietnam's Sea Port Network through 2020, with a Vision towards 2030.	
114	03/2020/TT-BGTVT	21/02/2020	Prescribing standards of competence, professional certificates training for seafarers, and minimum safe manning requirements for Vietnamese flagged ships.	
115	250-TTg	29/4/1995	Decision on the establishment of the Vietnam Maritime Corporation	
116	985/QD-TTg	25/6/2010	Transformation of the Parent Company – Vietnam Maritimes Corporation into a Single Share-Holder Limited Company owned by the Government.	
117	184/QD-TTg	15/11/2013	Operation Code of Vietnam Maritimes Corporation	
118	751/QD-TTg	20/6/2018	Approval of the Equitization Plan of the Parent Company - Vietnam Maritimes Corporation	
119	1089/QD-BGTVT	27/5/2011	Establishment of the Parent Company - Northern Vietnam Maritime Safety Corporation – VMS-North	
120	1099/QD-BGTVT	27/5/2011	Establishment of the Parent Company - Southern Vietnam Maritime Safety Corporation – VMS-Southern	
<b>Railway</b>				
121	1890/QD-BGTVT	03/7/2013	Function, Duty, Authority, and Organization Structure of Viet Nam Railway Agency	
122	35/2005/QH11 06/2017/QH14 24/VBHN-VPQH	14/06/2005 16/06/2017 10/12/2018	Law on Railway	
123	65/2018/ND-CP	12/5/2018	Detailed Regulation on the Implementation of Law of Railway Transport's Articles	
124	11/VBHN-BGTVT	20/12/2016	Regulation on the Registration of Railway Transport	
125	56/2018/ND-CP	16/01/2018	Management and Protection of railway infrastructure	
126	46/2018/ND-CP	11/3/2018	Management, use and operation of national railway infrastructure	
127	1468/QD-TTg	24/8/2015	Approving the adjusted Master Plan on development of Vietnam's railway transport through 2020, with a vision towards 2030.	

STT	Name of Document	Date Issued	Contents	Notes
128	1512/QD-BGTVT	27/4/2015	Project on the Restructuring of Railway Transport through 2020	
129	82/QD-TTg	14/01/2020	Approval of the Railway Network Planning through 2021-2030, with a Vision towards 2030	
130	34/2003/QD-TTg	04/3/2003	Decision on the Establishment of Vietnam Railway Corporation	
131	1883/QD-TTg	13/11/2009	Establishment of the Parent Company - Vietnam Railways Corporation	
132	11/2018/ND-CP	16/01/2018	Regulation on the Organization and Operation of the Vietnam Railways Corporation	
133	03/2021/TT-BGTVT	08/02/2021	Management and Maintenance of the National Railway Infrastructure.	
134	25/2020/QD-UBND	19/10/2020	Management, Operation, Exploitation, and Maintenance of the Hanoi Urban Railway Line 2A Cat Linh-Ha Dong	
<b>Aviation</b>				
135	2606/QD-BGTVT	07/9/2017	Function, Duty, Authority, and Organization Structure of Civil Aviation Authority of Vietnam.	
136	33/2013/TT-BGTVT	15/10/2013	Duty, Authority, and Organization of Civil Aviation Authority of Vietnam's Inspector.	
137	66/2006/QH11 61/2014/QH13	29/6/2006 21/11/2014	Law on Civil Aviation Law on amending and supplementing number of articles of the Vietnam Civil Aviation	
138	328-TTg	27/5/1995	Establishment of the Airports Corporation of Vietnam	
139	1611/QD-TTg	10/9/2014	Approval of the Equitization Plan for the Airports Corporation of Vietnam	
140	238/QD-BGTVT	08/02/2012	Establishment of the Airports Corporation of Vietnam by merging the Airports Corporation of the North, the Middle, and the South of Vietnam.	
141	1710/QD-TTg	06/10/2015	Approval of the Equitization Plan for the Parent Company - Airports Corporation of Vietnam	
142	92/2016/ND-CP	01/7/2016	Decree on providing for condition business sector or activities in the civil aviation industry.	
143	05/2021/ND-CP	25/01/2021	Decree on management and operation of airports and airfields.	
144	53/2019/TT-BGTVT	31/12/2019	Price and price range of aviation related at airports and aerodromes.	
145	193/2016/TT-BTC	08/11/2016	Rate, Collection Method, Payment, Management, and Usage of Aviation Sector's Fees and Charges.	
146	17/2019/TT-BGTVT	03/5/2019	Price range for transportation of passenger on internal flights.	
147	1495/QD-BGTVT	27/4/2015	Air Transport Restructuring Project through 2020.	
148	236/QD-TTg	23/02/2018	Decision on Approval for adjusted planning for development of air transport by 2020 and the orientation towards 2030.	
149	17/2016/TT-BGTVT	30/6/2016	On the management and operation of airports and aerodromes	
150	336/QD-TTg	04/3/2020	Approval of the Master Plan for the Development of National Airport and Aerodrome Network, through 2021-2030, with a Vision towards 2050	
151	125/2015/ND-CP	04/12/2015	Detailed Regulation on Flight Management	

STT	Name of Document	Date Issued	Contents	Notes
152	19/2017/TT-BGTVT	06/6/2017	Flight Management and Assurance	
153	1754/QD-BGTVT	25/6/2010	Establishment of the Parent Company-Vietnam Air Traffic Management Corporation (VATM)	
154	193/2016/TT-BTC	08/11/2016	Collection level, modes for collection, payment, management and use of in the aviation field.	
155	17/2019/TT-BTC	03/5/2019	Price range for transportation of passengers on internal flights	
156	247/2016/TT-BTC 27/2019/TT-BTC	11/11/2016 14/5/2019	Rate, Collection Method, Payment, Management, and Usage of Aerodrome and Airport's Franchise Fee. Amendment and Supplementation of Circular 247/2016/TT-BTC.	
<b>Registration</b>				
157	862/QD-BGTVT	05/11/2013	Function, Duty, Authority, and Organization Structure of Vietnam Register	
158	1303/QD-BGTVT	06/7/2020	Function, Duty, Power, and Organization Structure of the Registry Department of the Vietnam	
159	48/2015/TT-BGTVT 08/VBHN-BGTVT	22/9/2015 22/03/2021	Prescribing registration of inland waterway ships	
160	70/2015/TT-BGTVT	09/11/2015	Circular on providing for inspection of technical safety and environmental protection for means of road transport	
161	139/2018/ND-CP	08/10/2018	Motor Vehicle Inspection Service Business	
162	40/2016/TT-BGTVT	07/12/2016	Technical Registry of Vietnam's Ships.	

BGTVT = MOT  
BTC = MOF

TT = Circular  
VBHN = Consolidated document

TTLT = Joint Circular  
QD = Decision

ND-CP = Government Decree  
TTg = PM

付録 9.1: 高速道路プロジェクトリスト

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
<b>1. North-South Expressway in the East</b>						
E1	Huu Nghi Quan-Chi Lang	Connect to China via Huu Nghi Border gate, the section is 44km in length, 4-lane.	2021-2025	6,087	State Budget	MOT
E2	Cao Bo-Mai Son	A part of N-S Expressway, the section connects Hanoi to Ninh Binh Province and is 15km in length, 4-lane.	2021-2025, Under construction	2,628	State Budget	MOT
E3	Ninh Binh (Mai Son)-Thanh Hoa (NH45)	A part of N-S Expressway, the section connects Ninh Binh to Thanh Hoa Province and is 63km in length, 4-lane.	2021-2025, Under construction	10,960	State Budget	MOT
E4	E4-1: Thanh Hoa-Vinh (Thanh Hoa (NH45)-Nghi Son section)	A part of N-S Expressway, the section connects Thanh Hoa to Vinh Province. The section will also improve accessibility of seaports, SEZ and Airport. The section is 179km in length, 4-lane.	2021-2025, Under construction	7,433	State Budget	MOT
	E4-2: Thanh Hoa-Vinh (Nghi Son-Dien Chau section)		2021-2025	8,643	PPP, ODA	MOT, Private Sector
	E4-3: Thanh Hoa-Vinh (Dien Chau-Bai Vot section)		2021-2025	8,643	PPP (BOT), State Budget: 6 tril. VND, Private investment: 5 tril. VND	MOT, Private Sector
	E4-4: Thanh Hoa-Vinh (Bai Vot-Ham Nghi)		2021-2025	7,403	PPP, ODA	MOT, Private Sector
E5	Ha Tinh-Vung Ang	A part of N-S Expressway, the section within Ha Tinh Province. The section will also improve accessibility of seaport and SEZ. The section is 54km in length, 4-lane.	2021-2025	10,186	PPP, ODA	MOT, Private Sector
E6	Vung Ang-Cam Lo (Quang Tri)	A part of N-S Expressway, the section connects Ha Tinh to Quang Tri Province. The section will also improve accessibility of seaports, SEZs and Airports. The section is 177km in length, 4-lane.	2021-2025	32,902	PPP, ODA	MOT, Private Sector
E7	Quang Tri (Cam Lo)-Hue (La Son)	A part of N-S Expressway, the section connects Quang Tri to Thua Thien - Hue Province. The section will improve accessibility of seaports, SEZs and Airports. The section is 99km in length, 2-lane.	2021-2025, Under construction	17,044	State Budget	MOT
E8	Hue (La Son)-Da Nang (Tuy Loan)	A part of N-S Expressway, the section connects Thua Thien-Hue Province to Da Nang Province. The section will also improve accessibility of seaports, SEZs and Airport, and expand equi-time zone of major city Da Nang. The section is 66km in length, 2-lane.	2021-2025, Under construction	11,409	BT	MOT and Private Sector
E9	Quang Ngai-Quy Nhon	A part of N-S Expressway, the section connects Quang Ngai to Binh Dinh Province. The section will also improve accessibility of seaport, SEZ and Airport, and expand equi-time zone of international tourist destination Nha Trang. The section is 157km in length, 4-lane.	2021-2025	33,195	PPP, ODA	MOT, Private Sector
E10	Quy Nhon-Nha Trang	A part of N-S Expressway, the section connects Binh Dinh to Khanh Hoa Province. The section will also improve accessibility of seaports, SEZs and Airport, and expand equi-time zone of international tourist destination Nha Trang. The section is 196km in length, 4-lane.	2021-2025	34,590	PPP, ODA	MOT, Private Sector

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
E11	Nha Trang-Phan Thiet (Nha Trang-Cam Lam section)	A part of N-S Expressway, the section is within Khanh Hoa Province. The section will also improve accessibility of seaport and Airport and expand equi-time zone of international tourist destination in Nha Trang. The section is 29km in length, 4-lane.	2021-2025	5,013	PPP (BOT), State Budget: 2.9 tril. VND, Private investment: 2.6 tril. VND	MOT and Private Sector
E12	Nha Trang-Phan Thiet (Cam Lam-Vinh Hao section)	A part of N-S Expressway, the section connects Khanh Hoa to Binh Thuan Province. The section will also improve accessibility of seaport and Airport and expand equi-time zone of international tourist destination in Nha Trang. The section is 91km in length, 4-lane.	2021-2025	15,731	PPP, ODA	MOT, Private Sector
E13	Nha Trang-Phan Thiet (Vinh Hao-Phan Thiet section)	A part of N-S Expressway, the section is within Binh Thuan Province. The section is 101km in length, 4-lane.	2021-2025, Under construction	17,421	State Budget	MOT
E14	Phan Thiet-Dau Giay	A part of N-S Expressway, the section connects Binh Thuan to Dong Nai Province. The section will also improve accessibility from/to HCMC. The section is 99km in length, 4-lane.	2021-2025, Under construction	17,113	State Budget	MOT
E15	Long Thanh-Nhon Trach-Ben Luc	A part of N-S Expressway, the section connects Dong Nai to Long An province. The section will share/reduce the through traffic in the center of HCMC. The section is 55km in length, 4-lane.	2021-2025, Under construction	N/A	State Budget	MOT
E16	Trung Luong-My Thuan	A part of N-S Expressway, the section connects Dong Nai to Long An province. The section is 51km in length, 4-lane.	2021-2025, Under construction	8,816	PPP (BOT)	MOT, Private Sector
E17	My Thuan Bridge No.2	A part of N-S Expressway, the section connects Tien Giang to Vinh Long Province. The section will also improve accessibility between Mekong Delta area and HCMC. The section is 7km in length, 6-lane.	2021-2025, Under construction	1,210	State Budget	MOT
E18	My Thuan-Can Tho	A part of N-S Expressway, the section connects Vinh Long province to Can Tho. The section will also improve accessibility between Mekong Delta area and HCMC. The section is 23km in length, 4-lane.	2021-2025, Under construction	3,976	State Budget	MOT
E19	Can Tho-Ca Mau	A part of N-S Expressway, the section connects Can Tho to Ca Mau Province. The section will also improve accessibility between Mekong Delta area and HCMC. The section is 142km in length, 4-lane.	2021-2025	34,316	PPP, ODA	MOT, Private Sector
<b>2. North-South expressway in the West</b>						
E20	E20-1: Doan Hung-Hoa Lac-Khe Co (Doan Hung (Phu Tho)-Hoa Lac-Cho Ben section)	A part of N-S Expressway in the West, the section connects Doan Hung to Khe Co. The section also connects with N-S expressway in the East and Ha Giang-Tuyen Quang expressway. The section supports to develop along the western area and provides double route between Hanoi area and Ha Tinh Province. The section is 142km in length, 4-lane.	2026-2030	9,860	PPP, ODA	MOT, Private Sector
	E20-2: Doan Hung-Hoa Lac-Khe Co (Cho Ben-Khe Co section)		After 2030	103,802	ODA	MOT
E21	E21-1: Ngoc Hoi-Chon Thanh-Rach Gia (Ngoc Hoi-Chon Thanh section)	A part of N-S Expressway in the West, the section passing Kon Tum, Gia Lai, Dak Lak, Dak Nong, Binh Phuoc, Binh Duong, Long An, and Dong Thap Province. The section provides to improve easier drive and reduce travel time, and also supports to develop along the area. The section is 670km in length, Ngoc Hoi-Duc Hoa section is 2-lane and Duc Hoa-Cao Lanh section is 4-lane.	After 2030	68,112	ODA	MOT
	E21-2: Ngoc Hoi-Chon Thanh-Rach Gia (Chon Thanh-Duc Hoa section)		2021-2025	6,800	ODA	MOT



No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
	E21-3: Ngoc Hoi-Chon Thanh-Rach Gia (Duc Hoa-Thanh Hoa)		2021-2025	4,350	ODA	MOT
	E21-4: Ngoc Hoi-Chon Thanh-Rach Gia (Thanh Hoa-Tan Thanh section)		2021-2025	2,610	ODA	MOT
	E21-5: Ngoc Hoi-Chon Thanh-Rach Gia (Tan Thanh-My An section)		2021-2025	3,480	ODA	MOT
	E21-5: Ngoc Hoi-Chon Thanh-Rach Gia (My An-Cao Lanh section)		2021-2025, Under construction	4,524	ODA	MOT
<b>3. Expressways in Northern Region</b>						
E22	E22-1: Ha Noi-Thai Nguyen-Bac Kan-Cao Bang (Cho Moi-Bac Kan section) E22-2: Ha Noi-Thai Nguyen-Bac Kan-Cao Bang (Bac Kan-Cao Bang section)	This section connects Hanoi to China borders Tra Linh via Dong Dang - Tra Linh expressway, the section is 163km in length, 2-lane.	2021-2025 After 2030	2,243 6,988	ODA State Budget	MOT MOT
E23	E23-1: Hoa Binh-Son La-Dien Bien (Hoa Binh-Son La (Moc Chau) section) E23-2: Hoa Binh-Son La-Dien Bien Son La (Moc Chau)-Son La section) E23-3: Hoa Binh-Son La-Dien Bien (Son La - Dien Bien section)	This section connects Hanoi to Laos border Tay Trang gate, the section is 425km in length, 2-lane for Hoa Binh-Son La section, other sections are 4-lane.	2021-2025 2026-2030 After 2030	21,577 8,360 29,844	PPP, ODA PPP, ODA PPP	MOT, Private Sector MOT, Private Sector MOT, Private Sector
E24	Noi Bai-Bac Ninh-Ha Long (Bac Ninh-Ha Long section)	This section connects Noi Bai international airport to Ha Long bay area, the section improves accessibility between international airport and tourist destination area. The section is 136km in length.	After 2030	21,537	PPP	MOT, Private Sector
E25	Ninh Binh-Hai Phong-Quang Ninh (Ninh Binh-Hai Phong section)	This section is along the coastal area and improves accessibility of seaport or coastal SEZs. The section connects to N-S expressway at Cao Bac. The section is 134km in length, 4-lane.	2026-2030	21,221	PPP, ODA	MOT, Private Sector
E26	Hai Phong-Ha Long-Van Don-Mong Cai (Van Don-Mong Cai section)	This section is along the coastal area and connects China border Mong Cai gate to Hanoi area. The section also improves accessibility of seaports, coastal SEZs and international airport Van Don. The section is 80km in length, 4-lane.	2021-2025	12,669	PPP, ODA	MOT, Private Sector
E27	E27-1: Tien Yen-Lang Son-Cao Bang (Tien Yen (Quang Ninh)-Lang Son section) E27-2: Tien Yen-Lang Son-Cao Bang (Dong Dang (Lang Son)-Tra Linh (Cao Bang) section)	This section connects Van Don-Mong Cai Expressway including the coastal area to China borders Huu Nghi and Tra Linh gate, the section is 170km in length, Tien Yen (Quang Ninh)-Lang Son section is 2-lane and another is 4-lane.	After 2030 2021-2025	6,631 12,546	PPP PPP, ODA	MOT, Private Sector MOT, Private Sector
E28	Doan Hung (Phu Tho)-Tuyen Quang	This section connects Tuyen Quang to Hanoi area via Noi Bai-Lao Cai expressway, the section is 40km in length, 2-lane.	After 2030	3,113	PPP	MOT, Private Sector
E29	Cho Ben (Hoa Binh)-Yen My (Hung Yen)	This section connects Cho Ben to Hanoi area via Ha Noi-Hai Phong expressway, the section reduces travel time against the route via RR5. The section is 35km in length, 2-lane.	After 2030	2,710	PPP	MOT, Private Sector

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
E30	Connection Road from Noi Bai-Lao Cai Expressway to Ha Giang	This section connects Bac Quang to Hanoi area via Noi Bai-Lao Cai expressway, the section is 81km in length, 2-lane.	2021-2025	7,800	ODA	MOT
E31	Bao Ha-Lai Chau	This section connects Bao Ha of Noi Bai-Lao Cai expressway to China border Ma Lu Thang gate, the section is 203km in length, 2-lane.	After 2030	9,778	PPP	MOT, Private Sector
E32	Tuyen Quang-Ha Giang	This section connects Giang province or China border Thanh Thuy gate to Hanoi area via Noi Bai-Lao Cai expressway, the section is 165km in length, 2-lane.	After 2030	9,778	PPP	MOT, Private Sector
E33	Hung Yen-Thai Binh	This section is one of the radial roads centered on Hanoi City, the section is 70km in length, 4-lane.	After 2030	10,841	PPP	MOT, Private Sector
E34	Nam Dinh-Phu Ly (Ha Nam)	This section connects Nam Dinh to Phu Ly, the section is 55km in length, 4-lane.	After 2030	8,518	PPP	MOT, Private Sector
<b>4. Expressways in Central Region</b>						
E35	E35-1: Vinh-Thanh Thuy (Cao Lo-Vinh section)	This section connects Cua Lo seaport area including Vinh airport to China border Thanh Thuy gate, the section is 85km in length, 2-lane.	After 2030	3,185	PPP	MOT, Private Sector
	E35-2: Vinh-Thanh Thuy (Vinh-Thanh Thuy section)		2026-2030	10,350	PPP, ODA	MOT, Private Sector
E36	Cam Lo-Lao Bao	This section connects Laos border Lao Bao gate to N-S expressway, the section is 70km in length, 2-lane.	2026-2030	11,146	PPP, ODA	MOT, Private Sector
E37	E37-1: Quy Nhon-Pleiku-Le Thanh (Quy Nhon-Pleiku section)	This section connects Cambodia border Le Thanh gate to N-S expressway and HCM Road, also connects N-S expressway in the West route, the section is 210km in length, 2-lane.	2026-2030	25,478	PPP	MOT, Private Sector
	E37-2: Quy Nhon-Pleiku-Le Thanh (Pleiku-Le Thanh section)		After 2030	7,962	PPP	MOT, Private Sector
E38	Da Nang-Ngoc Hoi-Bo Y	This section is a part of the N-S expressway in the West route and provides easier and faster drive than existing road with steep slopes or sharp curves. The section also helps to develop western area by connecting with Da Nang area or the N-S expressway in the East. The section is 181km in length, 4-lane.	After 2030	57,644	PPP	MOT, Private Sector
E39	Quang Nam-Quang Ngai	This section connects coastal area (Dung Quat port) to western area and N-S expressway in the West route, the section is 100km in length, 4-lane.	After 2030	31,848	PPP	MOT, Private Sector
E40	Phu Yen-Dak Lak	This section connects coastal area (Phu Yen) to western area Dak Hue via Dak Lak, also connects N-S expressway in the West route, the section is 220km in length, 4-lane.	After 2030	70,065	PPP	MOT, Private Sector
E41	Lien Khuong-Buon Ma Thuot	This section connects Lien Khuong to N-S expressway in the West route at Buon Ma Thuot, the section is 115km in length, 4-lane.	After 2030	36,625	PPP	MOT, Private Sector
E42	Khanh Hoa-Buon Ma Thuot	This section connects Khanh Hoa to Buon Ma Thuot, also connects two N-S expressways. The section is one of the ladder routes. The section is 130km in length, 4-lane.	2021-2025	22,583	PPP, ODA	MOT, Private Sector
E43	Nha Trang-Da Lat	This section connects two international tourist destinations Nha Trang to Da Lat. The section provides easier and faster drive than existing road with steep slopes or sharp curves, as a result, the two tourism cities will	After 2030	18,293	ODA	MOT

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
E44	Vung Ang-Cha Lo	be connected by car (around 1.5 hours). The section is 115km in length. This section connects coastal area (Vung Ang port) to Cha Lo. The section is 115km in length, 4-lane.	After 2030	36,623	PPP	MOT, Private Sector
<b>5. Expressways in Southern Region</b>						
E45	Dau Giay-Lien Khuong-Da Lat	This section connects Dau Giay including HCMC area to international resort Da Lat. After development Nha Trang-Da Lat section, HCMC area and Nha Trang area will have been connected by two routes (i.e., N-S expressway in the East and this route). The section is 201km in length, 4-lane.	2021-2025	40,306	PPP, ODA	MOT, Private Sector
E46	Bien Hoa-Vung Tau	This section connects Bien Hoa to Vung Tau area. The section is 54km in length, 4-lane.	2021-2025	18,805	PPP, ODA	MOT, Private Sector
E47	E47-1: Ho Chi Minh City-Chon Thanh-Hoa Lu (HCMC-Thu Dau Mot-Chon Thanh section)	This section connects Cambodia border Hoa Lu gate to HCMC, the section is 126km in length, the HCMC-Thu	-	21,200	PPP, ODA	MOT, Private Sector
	E47-2: Ho Chi Minh City-Chon Thanh-Hoa Lu (Chon Thanh-Hoa Lu section)		After 2030	3,550	PPP	MOT, Private Sector
E48	Ho Chi Minh City-Moc Bai	This section connects Cambodia border Moc Bai gate to HCMC, the section is 65km in length, 4-lane.	2021-2025	13,600	PPP, ODA	MOT, Private Sector
E49	E49-1: Soc Trang-Can Tho-Chau Doc (Chau Doc-Can Tho section)	This section is one of the routes between Tran De seaport and Can Tho area, the section also connects to HCMC via expressway. The section is 180km length, 4-lane.	2021-2025	24,100	PPP, ODA	MOT, Private Sector
	E49-2: Soc Trang - Can Tho-Chau Doc (Can Tho-Soc Trang section)		2026-2030	9,800	PPP, ODA	MOT, Private Sector
E50	Ha Tien-Rach Gia-Bac Lieu	This section connects Cambodia border Ha Tien gate to Bac Lieu and connects to expressways, the section is 100km in length, with 2-lane and after 2030, the section will be expanded to 4-lane.	2026-2030	60,000	PPP, ODA	MOT, Private Sector
E51	Go Dau-Xa Mat	This section connects Cambodia border Xa Mat gate to HCMC, the section is 65km in length, 4-lane.	2026-2030	10,350	PPP, ODA	MOT, Private Sector
E52	Nha Be (HCM City)-My Tho (Tien Giang)-Ben Tre-Tra Vinh	This section connects HCMC to Tra Vinh and improves accessibility between HCMC area and Mekong Delta area, the section is 104km in length, 2-lane.	After 2030	16,560	State Budget	MOT
E53	Hong Ngu-Tra Vinh	This section connects Cambodia border Dinh Ba gate to Tra Vinh and connects to expressways, the section is 137km in length, 4-lane.	2026-2030	11,378	State Budget	MOT
54	Soc Trang-Tran De	This section is one of the routes between Tran De seaport and Can Tho area, the section also connects to HCMC via expressway. The section is in length 37km long, 4-lane.	2021-2025	7,477	PPP, ODA	MOT, Private Sector
<b>6. Ring Roads in Hanoi</b>						
E55	Ring Road No.4 in Ha Noi	The RR4 reduces through-traffic in Hanoi City. The section is 98km in length, 6-lane.	2021-2025	31,210	PPP, ODA	MOT, Private Sector
E56	Ring Road No.5 in Ha Noi	The RR5 reduces through-traffic in Hanoi City. The section is 200km in length, 4-lane.	2026-2030	36,000	PPP, ODA	MOT, Private Sector
<b>7. Ring Roads in Ho Chi Minh</b>						

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
E57	Ring Road No.3 in HCMC	The RR3 reduces through-traffic in HCM City. The section is 74km in length, 6-lane.	2021-2025	55,879	PPP, ODA	MOT, Private Sector
E58	Ring Road No.4 in HCMC	The RR4 reduces through-traffic in HCM City. The section is 105km in length, 6-lane.	2026-2030	33,281	PPP, ODA	MOT and Private Sector

付録 9.2: 鉄道プロジェクトリスト

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
<b>A: Upgrade and modification of Existing Line</b>						
R1	Upgrading North-South railway	To upgrade and gradually modernize the Hanoi - Ho Chi Minh City line, about 1,726km long, and; To achieve an average operation speed of 80-90km/h for passengers and 50-60km/h for freight services.	2021-2030 2031-2050	38,407 68,815	Central Budget Partially ODA	VNR/VNA
R2	Upgrading Hà Nội-Hải Phòng Railway	To renovate and upgrade Hà Nội-Hải Phòng railway about 102km for safe operation, and; To improve capacity and to bring the line into national railway technical grading system (Class II)	2021-2030 2031-2050	1,500 2,400	Central Budget	VNR/VNA
R3	Upgrading Hà Nội-Lào Cai Railway	To renovate and upgrade Hà Nội-Lạch Huyện railway to Class II with 1,000mm Gauge for safe operation, and; To continue to implement the Phase 2 of the project for Yen Vien-Lao Cai railway upgrade and renovation to enable train operation of Vmax = 80km/h, with a capacity of ≥ 25 pairs of trains (round trips) per day.	2021-2030	2,500	Central Budget	VNR/VNA
R4	Connecting of Lào Cai Station and Hà Khẩu Bắc Station	To provide track connection (dual gauge of 1435mm and 1000mm) between Lào Cai and North Hekou stations, as replacement for the existing connection point which is currently provided via stations of Hekou and Shanyao.	2021-2030	614	Central Budget	VNR/VNA
R5	Upgrading Hà Nội-Dồng Đăng Railway	To renovate and upgrade Hà Nội-Dồng Đăng railway about 167km with Dual Gauge for ensured operational safety, and to step-by-step bring it to the national railway technical grading system (Class III).	2021-2030	1,872	Central Budget	VNR/VNA
R6	Upgrading Hà Nội-Thai Nguyên Railway	To increase line capacity to 30-40 pair/day and night for safe operation. Quan to Luu Xa: Dual Gauge Luu Xa to Quan Trieu: 1,000mm Gauge	2021-2030	660	Central Budget	VNR/VNA
R7	Upgrading railway stations	To upgrade railway stations	2021-2030	2,400	Central Budget	VNR/VNA
R8	Railway overpasses	To develop grade separations with roads and special railways (overpasses or tunnels)	2021-2030	3,050	Central Budget & Local G	VNR/VNA
R9	Railway connecting to seaports	To connect to seaports (Nghị Sơn, Liên Chiểu)	2021-2030	923	Central Budget	VNR/VNA
<b>B: Construction of New Normal Lines</b>						
R10	Yên Viên-Phả Lại-Hà Long-Cái Lân railway	To develop the new railway between Yên Viên and Phả Lại for shortcut route of Yên Viên- Hà Long - Cái Lân railway.	2021-2030	6,000	Central Budget	VNR/VNA
R11	Mạo Khê-Dụ Nghĩa Section (connecting Yên Viên-Cái Lân railway to Hải Phòng)	To develop the new railway to connect the existing Yên Viên-Cái Lân Railway to Hải Phòng.	2021-2030	12,900	Central Budget	VNR/VNA
R12	Railway connecting to Lạch Huyện port (Đình Vũ, Lạch Huyện)	To develop a new line of Hai Phong-Dinh Vu Port-Lach Huyen about 32.65km.	2021-2050	35,500	Central Budget or PPP	MOT or PPP
R13	Biên Hòa-Vũng Tàu Railway	To serve intra-regional passenger operation (especially between HCMC and Bien Hoa and Vung Tau) and inter-regional operation as well as cargo transport to Cai Mep-Thi Vai international terminal.	2021-2030 2031-2050	5,688 51,195	Central Budget or PPP	MOT or PPP

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
R14	Ngọc Hồi-Lạc Đạo Railway (Hà Nội: Eastern Ring-Railway)	To develop the Hà Nội Eastern ring-railway about 59km with dual gauge to connect the southern line to HCMC with the eastern line to Hai Phong.	2021-2030 2031-2050	9,980 30,020	Central Budget	MOT
R15	Thủ Thiêm-Long Thành light railway	To provide passenger service as an urban railway line near HCMC but also provides inter-regional connection with the national railway network for highest performance, and: To connect HSR station /Long Thanh international airport and the center of HCMC.	2026-2030	6600	ODA	MOT or HCMC
R16	Tân Ấp-Mụ Giạ-Vũng Áng Railway	To develop Vung Ang-Cha Lo (Mu Gia) line, about 102km in length, to connect with the Laos' railway at Mu Gia	2021-2030 2031-2050	1,735 15,617	Central Budget	VNR/VNA
R17	HCM City-Cần Thơ Railway	To transport passengers within the region (especially between HCMC and Long An) and also cover inter-regional services (HCMC with the Mekong River Delta) in combination with freight transportation.	2021-2030 2031-2050	100 157,154	Central Budget Partially ODA	MOT
R18	Đĩ An-Lộc Ninh Railway	To provide international transportation with Cambodia and intra-regional passenger transportation services (especially between HCMC and Binh Duong), inter-regional services (HCMC and Central Highlands), and combined with freight transportation service.	2026-2030	20,938	Central Budget	VNR/VNA
<b>C: Construction of HSR</b>						
R19	HSR: Hà Nội-Vinh section	To develop HSR Hà Nội-Vinh section as the first priority section	by 2040	273,237	Central Budget & ODA	MOT
R20	HSR: Nha Trang-Hồ Chí Minh City section	To develop HSR Nha Trang-Hồ Chí Minh City section as the first priority section	by 2040	288,361	Central BUDGET & ODA	MOT
R21	HSR: Vinh-Da Nang section	To develop HSR Vinh-Da Nang section after starting revenue service of Hà Nội - Vinh section	by 2050	313,597	Central Budget & ODA	MOT
R22	HSR: Da Nang-Nha Trang section	To develop HSR Da Nang-Nha Trang connecting the north and south section of HSR after starting revenue service of Vinh-Da Nang section.	by 2050	459,048	Central Budget & ODA	MOT
<b>D: Others</b>						
R23	Replacing Old Railway Bridges	To study the replacement for Old Railway Bridge of Limitations of low clearance bridges for IWT sector such as: Duong Bridge (Duong river), Quay Bridge (Dao Ha Ly river), Long Biên Bridge (Hong river), Pho Lu Bridge (Hong river)	2021-2030		Central Budget & Local	MOT & Provincial PC

### 付録 9.3: 内陸水運プロジェクトリスト

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
W1	Clearance Lifting for Duong bridge (Corridor 1)	To improve traffic capacity of Duong river on waterway transport from Quang Ninh to Viet Tri. Waterway transport corridor No. 1 from Quang Ninh to Viet Tri port on Lo river was upgraded to Level II and it allows 800-ton vessels to travel. However, a main obstacle on this corridor is Duong bridge in Hanoi city. Currently, Duong bridge is shared by road traffic and Hanoi-Dong Dang railway line. Duong bridge has a low clearance of 2.8 m in case of high tide. As a result, it allows only vessels with loading up to 600 tons to travel. Hence, it is necessary to lift the clearance for Duong bridge.	2021–2025	2,300	Stage budget	Hanoi People's Committee 15 & MOT
W2	Project on the canal connecting Day river and Ninh Co river (Corridor 3)	To improve the connectivity of waterways on Ha Noi–Nam Dinh–Ninh Binh corridor, especially for the route of Lach Giang Estuary–Ninh Co River–Day River. Vessels with loading of 2000 to 3000tons can travel from Lach Giang Estuary of Ninh Co River to Ninh Phuc Port on Day River in Ninh Binh City via connecting canal between these rivers. Connecting canal is 1 km in length and 90-100m in width.	2021–2025	1,800	State budget & WB	VIWA16
W3	Quang Ninh–Ninh Binh route over Luoc River–Phase 1	To improve traffic capacity of waterways on Quang Ninh–Hai Phong–Ninh Binh corridor, especially for the route via Luoc River. Luoc River is one of alternative waterway route for the corridor of Quang Ninh–Hai Phong–Ninh Binh. Luoc River is 72km in length and II-class river up to 2030. Freight transport volume on Luoc River: <ul style="list-style-type: none"> <li>■ 17–18 million tons in 2019; 73–80 thousand vessels in 2019</li> <li>■ 28–30 million tons in 2030</li> </ul>	2021–2025	7,200	State budget	VIWA
W4	Project on transport route of Hoa Binh–Son La–Lai Chau hydropower reservoir route	To maintain traffic capacity of the waterway route among Lai Chau, Son La and Hoa Binh provinces. The route is 442km in length, and III-class river up to 2030; Freight transport volume was about 0.6-1.4 million tons in 2019; 7 to 8 thousand vessels in 2019	2021–2030	300	State budget	VIWA
W5	Viet Tri–Yen Bai–Lao Cai Route (Section Viet Tri–Yen Bai)	To improve traffic capacity of waterways on the transport corridor of Hanoi–Viet Tri–Lao Cai, especially for section of Viet Tri–Yen Bai. The section of Viet Tri–Yen Bai is 125km in length and III-class river up to 2030; Freight transport volume was about 65 – 230 thousand tons in 2019; 1.8–2.2 thousand vessels in 2019	2026–2030	1,500	State budget	VIWA
W6	Project on sea-river transport route via Tra Ly estuary	To facilitate sea-river transport via Tra Ly river in Thai Binh Province. Tra Ly River is 70km in length and II-class river up to 2030. Freight transport volume was about 1–4 million tons in 2019; 7.4 to 16.9 thousand vessels in 2019	2021–2030	3,500	Private sector	VIWA & Private sector
W7	Project on waterway transport route of Day estuary–Ninh Binh–Phu Ly	To improve traffic capacity of the Hanoi–Ninh Binh–Nam Dinh waterway transport corridor, especially for the transport routes of the estuary of Day River–Ninh Binh–Phu Ly. The route is 72km in length and special class river by 2030. Projected freight transport volume on this route is about 5.6 to 5.9 million tons in 2030.	2021–2030	2,500	Private sector	VIWA & Private sector
W8	Project on Hai Phong–Hanoi waterway transport route via the estuary of Van Uc River	To improve traffic capacity and connectivity of waterway transport between Hanoi and Hai Phong, especially for Van Uc River and its estuary. Van Uc river is 32km in length and it will be upgraded from II-class to specially class by 2030. Projected freight transport volume is about 6.8 to 8.7 million tons in 2030	2021–2030	2,200	State budget	VIWA

<sup>15</sup> Official Dispatch No. 5292/PCP-CN dated 1/7/2020 on investment preparation for the project on lifting clearance for Duong bridge

<sup>16</sup> <https://tuoitre.vn/dong-tho-cum-cong-trinh-giup-tau-3-000-tan-vao-song-day-20201119140246961.htm>

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
W9	Project on Viet Tri-Lao Cai route (section of Yen Bai-Lao Cai, construction of dams and locks)	To improve traffic capacity of Hanoi-Viet Tri-Lao Cai waterway transport corridor, especially for the section of Yen Bai-Lao Cai. This section is 166 km in length and it will be upgraded from V-class to III-class by 2030. Freight transport volume: <ul style="list-style-type: none"> <li>■ 2019: 35÷230 thousand tons (Yen Bai-Lao Cai section); 966 to 1,811 vessels</li> <li>■ 2030: 23.5÷24.8 million tons (Hanoi-Viet Tri-Lao Cai route).</li> </ul>	2021-2030	15,000	Private sector	VIWA & Private sector
W10	Project on upgrade of bridges with low clearance in the North	To improve traffic capacity and connectivity of waterway transport network in the North of Vietnam	2021-2030	6,000	State budget	VNPA, DRVN or Provincial PCs
W11	IWT route of Ninh Binh-Thanh Hoa	To improve traffic capability of the Ninh Binh-Thanh Hoa route	2021-2025	450	State budget	VIWA
W12	Project on strengthening IWT signaling system for waterway transport routes in the Central region	To improve traffic safety level and keep smooth traffic on waterway transport routes in the Central region	2021-2030	300	State budget	VIWA
W13	Project on Ma River-section from Bong junction to Vinh Ninh junction (Thanh Hoa province)	To maintain existing traffic capacity of section from Bong junction to Vinh Ninh junction of Ma River. The section is 19km in length, and its IV-class will be unchanged up to 2030. Freight transport volume on Ma river: 2.20÷3.25 million tons in 2030	2021-2030	80	State budget	VIWA
W14	Project on upgrade of Len River (Thanh Hoa Province)	To improve traffic capacity of Len River in Thanh Hoa Province. The river is 51km in length, including: 39.5km from Lach Sung estuary to Do Len (first section), and 11.5km from Do Len to Bong junction. By 2020, the first section will be upgraded from IV-class to I-class, while the second one will be lifted from IV-class to III-class. Freight transport volume is projected from 690 thousand tons in 2019 to 1.78÷2.31 million tons in 2030.	2021-2030	120	State budget	VIWA
W15	Project on Lam River waterway transport route (Nghe An Province)	To maintain smooth traffic on Lam river in Nghe An province. Lam river is 157.4km in length from Ben Thuy port to Cay Chanh junction. The class of Lam river will be unchanged up to 2030 (III- or IV class depends on certain sections). Freight transport volume on Lam river (from Ben Thuy port to Do Luong) will increase from 0.9÷1.3 million tons in 2019 about 2.46÷3.00 million tons in 2030.	2021-2030	120	State budget, private sector	VIWA & private sector
W16	Project on Ho Do-Cua Sot waterway transport route (Ha Tinh Province)	To maintain smooth traffic on Nghen river, especially for the section from Ho Do bridge to Cua Sot. The section is 14km in length from the estuary of Nghen river to Ho Do bridge (crossing Nghen river). This section is III-class river and it will be unchanged up to 2030. The freight transport volume will increase from 1.8 million tons in 2019 to 2.31÷2.56 million tons in 2030.	2021-2030	60	State budget, private sector	VIWA & private sector
W17	Project on upgrade of Gianh River - phase 2 (Quang Binh province)	To maintain smooth traffic on Gianh River in Quang Binh Province. The section of Gianh River from Petro Gianh Port to Dong Lao is 63km in length. This section is III-class river and it will be unchanged up to 2030. The freight transport volume will slightly decrease from 2.6 million tons in 2019 to 2.28÷2.52 million tons in 2030.	2021-2030	250	State budget	VIWA
W18	Project on Huong-river route from Thuan An estuary to Tuan junction (Thua Thien Hue Province)	To maintain smooth traffic on Huong river in Thua Thien Hue province. The section of Huong river from Thuan An Port to Tuan junction is 34km in length. This section is IV-class river and it will be unchanged up to 2030. The freight transport volume is projected at 0.38÷0.42 million tons in 2030.	2021-2030	200	State budget, private sector	VIWA & private sector
W19	Project on Co Co-Truong Giang river route from Han-Cua	To maintain smooth traffic on Truong Giang River. The section of Truong Giang River from Ky Ha Port to An Lac junction is 60.2km in length. This section	2021-2030	350	State budget, private sector	VIWA & private sector



No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
	Dai confluence to Ky Ha Port (Quang Nam-Da Nang)	is IV-class river and it will be unchanged up to 2030. The freight transport volume is projected at 0.72-0.75 million tons in 2030.				
W20	Cho Gao canal project	To improve the capacity and connectivity of waterway transport from Southern provinces to Ho Chi Minh city. The canal is a connection between Tien Giang River and Vam Co River and it is 28.5km in length. This section is II-class river and it will be unchanged up to 2030.	2021-2025	1,500	State budget	VIWA
W21	Project on Cho Dem-Ben Luc waterway transport route	To improve connectivity of waterway transport between Long An and Ho Chi Minh city. Cho Dem-Ben Luc river is 20km in length and it links Vam Co Dong river with waterway network in the south of Ho Chi Minh city. By 2030, it will be upgraded from III-class to II-class.	2021-2030	200	State budget	VIWA
W22	Project on development of logistics and waterway corridors in the South	To upgrade inland waterway infrastructures in Mekong Delta region and Ho Chi Minh City.	2021-2025	5,800	WB	VIWA
W23	Project on improvement of Rach Gia-Ca Mau route	To improve capacity of Rach Gia-Ca Mau route. The route is 109 km in length. By 2030, it will be III-class waterway route.	2021-2030	1,800	State budget	VIWA
W24	Project on upgrade of Muong Khai-Doc Phu Hien canal	To improve capacity and connectivity of waterway network in Mekong Delta region, especially for the connections among Dong Thap province and Can Tho city This canal links Hau river and Mekong river and it is 20.8 km in length. By 2030, it will be III-class waterway route	2021-2025	2,300	State budget	VIWA
W25	Waterway route on Sai Son river (Section of Ben Suc - Ben Cui, downstream of Dau Tieng dam)	To improve capacity of waterway connection among Ho Chi Minh city, Binh Duong, Binh Phuoc and Tay Ninh provinces This route is 129 km in length. By 2030, it will be II-class waterway route. Freight transport volume on Sai Gon - Ben Suc - Ben Cui route (Sai Gon river) is projected at 6.3-7.2 million tons in 2030.	2021-2025	450	State budget	VIWA
W26	Waterway route on Ham Luong river from confluence of Tien river to Ham Luong estuary	To improve capacity of waterway corridor to Cambodia. This river is 86 km in length. By 2030, it will be special-class waterway route. Freight transport volume is projected 2.7-4.8 million tons in 2030.	2021-2030	500	Private sector	VIWA & Private sector
W27	Improvement and upgrade of low-clearance bridges in the South	To improve capacity and connectivity of waterway network in the South.	2021-2025 2026-2050	1,200 14,500	State budget private sector	VNRA, DRVN or Provincial PCs private sector
W28	Project on dredging Sai Gon-Kien Luong route, section from Lo Vap Sa Dec to Kien Luong	To improve capacity of waterway route from southern provinces to Ho Chi Minh city. This canal is 51.5 km in length and it links Tien Giang river and Hau river. By 2030, it will be III-class waterway route. Freight transport volume on Sai Gon - Kien Luong route via Lap Vo - Sa Dec canal is projected at 18.9-19.7 million tons in 2030	2021-2030	1,660	State budget, private sector	VIWA & private sector
W29	Upgrade of Sai Gon-Ca Mau route (Can Tho-Ca Mau section)	To improve capacity of waterway route from Ca Mau to Can Tho. This route is about 104 km in length. By 2030, it will be III-class waterway route. Freight transport volume on Can Tho - Ca Mau route (via Quan Lo - Phung Hiep canal) is projected at 27.2-30.1 million tons in 2030.	2021-2030	1,700	State budget, private sector	VIWA & private sector
W30	Upgrade of Rach Soi-Hau Giang canal	To improve capacity of water route between Hau Giang and Kien Giang. This route is about 64 km in length. By 2030, it will be III-class waterway route.	2021-2030	1,550	State budget, private sector	VIWA & private sector
W31	Rach Gia bypass route	To improve capacity and connectivity of waterway network in Kien Giang province	2021-2030	2,500	State budget.	VIWA & private sector

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
W32	Improvement of River Ports in the Northern Region	(Phase I) Including port groups: Hanoi, Bac Ninh, Yen Lenh, Nam Dinh, Ninh Binh, Ben Kien, Thuy Nguyen, Van Uc, Kim Thanh, Viet Tri, Da Phuc, Bac Giang, Ka Long, Pho Moi, Van Phu, Hoa Binh, Son La, Lai Chau. Ports throughput in 2030 50.2 million tons in total. Planned ship size in 2030 from 400 tons to 5,000 tons. (Phase II) To meet increased demand, further improvement of port groups will be implemented. Ports throughput in 2050 97.6 million tons in total Planned ship size in 2050 from 400 tons to 5,000 tons	2021-2030  2031-2050	30,000	private sector State budget, private sector, ODA	sector VIWA, private sector, donors
W33	Improvement of River Ports in the Central Region	(Phase I) Including ports: Do Len, Lach Banh, Hung Hoa, Quynh Loc, Ho Do, Nhat Le, Ba Don, Dong Ha. Ports throughput in 2030 2.2 million tons in total Planned ship size in 2030 from 100 tons to 3,000 tons (Phase II) To meet increased demand, further improvement of port groups will be implemented. Ports throughput in 2050 4.6 million tons in total Planned ship size in 2050 from 200 tons to 3,000 tons	2021-2030  2031-2050	2,500	State budget, private sector, ODA	VIWA, private sector, donors
W34	Improvement of River Ports in the Southern Region	(Phase I) Including port groups: HCMC, An Son, Ben Suc, Thanh Phuoc, Tay Ninh, Nhon Trach, Ben Luc, Long Duc, Vinh Long, Sa Dec, Binh Long-An Giang, Tac Cau, Ca Mau. Ports throughput in 2030 30 million tons in total Planned ship size in 2030 from 1,000 tons to 5,000 tons (Phase II) To meet increased demand, further improvement of port groups will be implemented. Ports throughput in 2050 56.3 million tons in total Planned ship size in 2050 from 1,000 tons to 5,000 tons	2021-2030  2031-2050	10,000	State budget, private sector, ODA	VIWA, private sector, donors
W35	IWT-ICD Development in the Northern Vietnam	(Phase I) 4 IWT-ICDs (Phuc Loc in Ninh Binh, Mong Cai in Quang Ninh, Que Vo in Bac Ninh, Hai Linh in Phu Tho) (Phase II) To meet increased demand, further IWT-ICDs will be developed. Candidate sites are (1) Viet Hung in Quang Ninh, (2) Nghia Hung in Nam Dinh, (3) Dong Son in Bac Giang, (4) Co Bi – Phu Dong in Hanoi City, (5) Dinh Vu in Hai Phong City.	2021-2030  2031-2050	70,000	State budget, private sector, ODA	VIWA, private sector, donors
W36	IWT-ICD Development in the Southern Vietnam	(Phase I) 4 IWT-ICDs (Long Binh in HCM City, An Son in Binh Duong, Ben Luc in Long An, Chau Thanh in Hau Giang) (Phase II) To meet increased demand, further IWT-ICDs will be developed. Candidate sites are (1) Red Light Cape in HCM City, (2) Ben Thanh in HCM City, (3) New Nhon Trach in Dong Nai, (4) Phuoc An in Dong Nai, (5) Phuoc Hoa in Ba Ria – Vung Tau, (6) Tan Uyen in Binh Duong, (7) An Dien in Binh Duong, (8) Thanh Phuoc in Binh Duong, (9) Thanh Phuoc in Tay Ninh, (10) Cu Chi in HCM City, (11) Binh Long in An Giang, (12) Viet Phat in Long An.	2021-2030  2031-2050	4,473	Private Private	Private Private
W37	Traffic Safety Management and Training	To ensure the navigational safety and to enhance reliability of inland waterway navigation. Some main points: i) Integration of IWT into multi-modal logistics networks by introduction of real-time information services; ii) Study and application of state-of-the-art ICT technologies in infrastructure management, traffic safety control, vessel registration and inspection management, iii) training of personnel	2021-2030	3,000	State budget & private sector	VIWA & private sector

付録 9.4: 港湾プロジェクトリスト

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
P1	Lạch Huyện port	Development of roads to berths No. 3, 4, 5 and 6; 4 container berths will be developed by private sector. The cargo handling capacity is assumed to increase 2.2 million TEU/year	2021-2030	13,971	State Budget, Private sector	Vinamarine, Private sector
P2	Nghi Sơn Port Expansion Project	Nghi Sơn Port is a major industrial port in northern Vietnam and handles mainly bulk cargo to oil refinery, cement factory, power plants, etc. Bulk cargo handling volume of Seaport Group 2 is expected to increase significantly. Nghi Sơn port is needed to expand to meet demand of the market as well as growing sea vessels.	2026-2030	7,600	State Budget Private sector	Vinamarine, Private sector
P3	Liên Chiểu port Development project	Develop breakwaters and channels with container berths to Lien Chieu port for vessels of 100,000 tons. Breakwater: 820m, 350m, Channel: 7,250m, -14m; Container berth: 2 berths	2021-2030	10,910	State budget, ODA Private sector	Vinamarine,
P4	Cái Mép Hà port and logistic area	Development of logistics center and port with total area 1,800 ha. Main function of logistics area is for heavy chemical industry, crude oil/petroleum products storage and ICs.	2021-2030 2030-2040	18,400 4,600	Private sector	MOT, MOIT Vinamarine, Private sector
P5	Trần Đề Port	Development of new hub port in Mekong delta region of Tran de estuary offshore about 10km to 16km. Total berth length is 9,000m with depth 17m for 160,000DWT. Estimated cargo handling capacity is 150,000,000 tons. Logistics are on shore is 4,000ha. Dredging to accommodate 200,000 DWT vessel (load reduced).	2021-2030 2030-2040	6,000 44,000	State budget, Private sector	MOT, Vinamarine, Private sector
P6	Dredging channels into ports in Cam Pha area and Hon Ne transshipment area		2026-2030	150	State Budget	Vinamarine,
P7	Upgrading Hòn Gai - Cái Lân navigational channel	Expansion of ship turning basin for 50,000 DWT vessels: D=450m; H=-10m.	2021-2025	200	State Budget	Vinamarine,
P8	Upgrading and expanding of Ha Nam channel, Lạch Huyện - Hải Phòng navigational channel	Control flows and utilize of the slope for vessels operation in Lach Huyen channel section by expansion of the curving section upper Ha Nam channel.	2026-2030	76	State Budget	Vinamarine,
P9	Construction of dykes to regulate navigational channels Diêm Điền	Improve and upgrade Diem Dien navigational channel (including channel regulation dyke), 2.49 km northern dike and 1.01km southern dike.	2026-2030	200	State Budget	Vinamarine,
P10	Upgrading the navigational channels to the ports in Southern Nghi Sơn and Thanh Hóa regions	Improve channel to accommodate 50,000DWT vessels (B=150m, H=-13m).	2021-2025	636	State Budget	Vinamarine,
P11	Upgrading Cửa Lò channel	Improve channel to accommodate 30,000 DWT vessels at full load and 50,000 DWT with reduced load. Construction of 1,100m breakwater of north Cua Lo port	2021-2025	1,018	State Budget	Vinamarine,
P12	Constructing breakwaters in Vũng Áng port, Hà Tĩnh	Improve and upgrade Vung Ang channel for vessels of 50,000 tons (including improvement and upgrading of sand dykes to extend 110 m).	2026-2030	280	State Budget	Vinamarine,
P13	Upgrading Hòn La channel	Improve channel to accommodate 50,000DWT vessels (B=120m, H=13.2m).	2026-2030	68	State Budget	Vinamarine,

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
P14	Constructing sand dykes for Cửa Gianh channel	Development of two sand regulating dikes: the northern one 1,100 m and the southern one 800 m long.	2026-2030	566	State Budget	Vinamarine,
P15	Upgrading sand dykes for Cửa Việt channel	Improve the dike elevation to +2.0m. Lengthen the northern dike to 260 m and the southern one to 320 m.	2026-2030	400	State Budget	Vinamarine,
P16	Upgrading Đà Nẵng channel for ships of 50,000 DWT	To upgrade the channel and expand the turning basin for 50,000 DWT vessels operation (B=140m, H=-13.5m)	2026-2030	100	State Budget	Vinamarine,
P17	Construction of a channel to Thọ Quang port, Đà Nẵng	Improvement channel is aiming to accommodate vessels that: From the ship turning basin of Tien Sa port to the turning basin of Son Tra port to handle 10,000 DWT ships. From Son Tra turning basin to Song Thu shipbuilding plant for operation of 3,000 DWT ships and 8,000 DWT empty load ships.	2026-2030	82	State Budget	Vinamarine,
P18	Upgrading Quy Nhơn channel for 50,000 DWT ships	Improve channel to accommodate 50,000 DWT vessels (B=140m, H=-13m).	2026-2030	421	State Budget	Vinamarine,
P19	Upgrading Ba Nguoi channel for 50,000 DWT ships	Improve channel to accommodate 50,000 DWT vessels (B=140m, H=-13,0m).	2026-2030	156	State Budget	Vinamarine,
P20	Dredging Phan Thiết navigation channel for 1,000 DWT ships	Improve channel to accommodate 1,000DWT vessels.	2021-2025	28	State Budget	Vinamarine,
P21	Cái Mép - Thị Vải channel	Upgrade the Cai Mep - Thi Vai channel from bouy "0" to Go Dau port area. To accommodate ships up to 200,000 DWT (18,000TEU).	2021-2025	1,400	State Budget	Vinamarine,
P22	Upgrading the Sài Gòn - Vũng Tàu channel	Improve and upgrade the Saigon - Vung Tau channel (from Ganh Rai buoy to Thieng Lieng canal) for vessels of 70,000 DWT full load and larger vessels offload.	2026-2030	290	State Budget	Vinamarine
P23	Upgrading the Soai Rap channel	Dredging and maintaining of shallow sections; studying and applying measures to regulate rivers (Dykes, embankments and other) to ensure the depth of the channel to operate full loaded vessels of 30,000 tons, and reduced loaded 50,000 tons.	2026-2030	500	State Budget	Vinamarine
P24	Upgrading the Dua river channel	Improve and upgrade to accommodate 10,000 DWT vessels.	2026-2030	162	State Budget	Vinamarine
P25	Upgrade of channels to Hậu river (Phase 2)	Target vessel is 20,000 DWT.	2021-2025	2,225	State Budget	Vinamarine,
P26	Dredging navigational channels through Tran De estuary	Improve channel to accommodate 2,000 DWT vessels (B=120m, H=-2.8m).	2026-2030	151	State Budget	Vinamarine,
P27	Investing in dredging Tien River navigation channel	Improve channel to accommodate 5,000 DWT vessels	2021-2025	300	State Budget	Vinamarine
P28	Vessel management system (VTS) of Hòn Gai - Cái Lân channel	Install VTS in Hon Gai - Cai Lan channel	2026-2030	110	State Budget	Vinamarine,
P29	Vessel Management System (VTS) channel for large ships entering the Hậu river	Install VTS in Hau river channel	2026-2030	110	State Budget	Vinamarine,
P30	ICD development plan	ICD development projects expected to invest until 2030 according to the approved ICD	2021-2030	6,500	Private sector	Vinamarine,

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
		System Plan. The cost of 6,500 billion VND is the estimation from the implementation amount of the projects by 2020.				Private sector
P31	Sea ports development plan	Sea ports development projects expected to invest until 2030 according to the approved Seaport System Plan. The ports to be expanded and improved are as follows: Cam Pha, Cai Lan and Hon Gai, Hai Phong, Diem Dien, Nghi Son, Cua Lo, Vung Ang, Hon La-Mui Doc, Gianh Estuary, Cua Viet, Da Nang, Quy Nhon, Cam Ranh, Phan Tiet, Vung Tau, HCMC, Can Tho, Tien Giang, Soc Trang, etc. The cost of 138,043 billion VND is the estimation from the implementation amount of the projects by 2020.	2021-2030	138,043	Private sector	Vinamarine, Private sector
P32	National RORO network development plan	Development of RORO network connecting major ports along the coast of Vietnam. Candidate ports are Hai Phong port, Da Nang port, Dung Quat port, Nha Trang port, Vung Tau port and Tran De port (future). Initial stage of the project, two RORO vessels will be put into service.	2021-2030	7,800	State budget, Private sector	MOT, Vinamarine, Private sector
P33	Ship procurement for search and rescue	Procurement of one specialized ship for search and rescue operation far from shore	2021-2025	424	State budget	Vinamarine
P34	Ship procurement for inspection in the Spratly area and offshore islands in South	Procurement specialized ships for inspection in sea and the Spratly area and offshore islands in the South	2021-2025	250	State budget	Vinamarine
P35	Ship procurement for inspection in offshore islands in North	Procurement specialized ships for inspection in sea and offshore islands in the South	2021-2025	134	State budget	Vinamarine
P36	Setting up the generation Cospas Sarat Satellite Station MEOLUT	Procurement of special maritime rescue communication system	2021-2025	109	State budget	Vinamarine
P37	Development lighthouse (1)	Install lighthouse at Truong Sa Dong, Phan Vinh, Sau Dong, Lach Gep, Lach Quen, Cua Van and Hon La	2021-2025	140	State budget	Vinamarine
P38	Development lighthouse (2)	Install lighthouse at Tu Chinh A, Tu Chinh B, Phuc Nguyen, Da Lat and Mui La Gan	2021-2025	550	State budget	Vinamarine
P39	Development of navigation channel management station	Install navigation channel management system at Lach Huyen, Dong Bai, Dung Quat, Ly Nhon, Go Gang, Dong Nai, Dong Tranh and Ba Ngoi	2021-2025	48	State budget	Vinamarine
P40	Development of Coastal Information Station,	Development of Coastal Information Station, Center for Engineering and Technology, Representative of Nha Trang Port Authority in Truong Sa	2021-2025	117	State budget	Vinamarine

付録 9.5: 航空プロジェクトリスト

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
A1	Noi Bai International Airport (Hanoi)	To develop terminal T3 with expansion Apron stands. Northern, Southern airside facilities, installation IATA One ID system. Passenger Capacity: 25 Mil Pax/year (Existing) → 60 Mil Pax/year (2030) To develop terminal T4 and T5 with expansion of apron stands. To construct South Runway and connecting taxiways for Code E and F aircraft. Passenger Capacity: 60 Mil Pax/year (2030) → 100 Mil Pax/year (2050)	2021–2025  2031–2050	97,057  -	State's Budget Others  State's Budget Others	ACV  ACV
A2	Van Don International Airport (Quang Ninh)	To expand Terminal and Apron stands. To construct Taxiway Passenger Capacity: 2.5 Mil Pax / Year (Existing) → 5.0 Mil Pax/Year (2030) To develop New terminal and expansion of Apron stands. To construct additional Runway and connecting taxiways for Code E aircraft. Passenger Capacity: 5 Mil Pax/year (2030) → 12 Mil Pax/year (2050)	2025–2030  2031–2050	5,280  -	State's Budget Others  State's Budget Others	Other  Other
A3	Cat Bi International Airport (Hai Phong)	To expand Terminal and Apron stands. To develop a parallel taxiway on the old runway, connecting taxiways Passenger Capacity: 2.0 Mil Pax / Year (Existing) → 8.0 Mil Pax/Year (2030) To develop New terminal with expansion of Apron stands. To construct additional Runway and connecting taxiways for Code E aircraft. Passenger Capacity: 8 Mil Pax/year (2030) → 15 Mil Pax/year (2050)	2025–2030  2031–2050	10,568  -	State's Budget Others  State's Budget Others	ACV  ACV
A4	Tho Xuan International Airport (Thanh Hoa)	To construct New Terminal with expansion of Apron stands Passenger Capacity: 1.2 Mil Pax / Year (Existing) → 5.0 Mil Pax/Year (2030) To develop New terminal with expansion of Apron stands. To construct additional Runway and connecting taxiways for Code E aircraft. Passenger Capacity: 5 Mil Pax/year (2030) → 7 Mil Pax/year (2050)	2025–2030  2031–2050	8,887  -	State's Budget Others  State's Budget Others	ACV  ACV
A5	Vinh International Airport (Nghe An)	To construct New Terminal with expansion of Apron stands. To construct New Runway for Code E aircraft. Passenger Capacity: 2.6 Mil Pax / Year (Existing) → 8.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. To construct additional connecting taxiways. Passenger Capacity: 8 Mil Pax/year (2030) → 14 Mil Pax/year (2050)	2025–2030  2031–2050	14,942  -	State's Budget Others  State's Budget Others	ACV  ACV
A6	Phu Bai International Airport (Thua Thien Hue)	To develop new terminal with expansion of apron stands. To construct parallel taxiway. Passenger Capacity: 1.5 Mil Pax / Year (Existing) → 7.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. To construct additional Runway and connecting taxiways for Code E aircraft. Passenger Capacity: 7 Mil Pax/year (2030) → 12 Mil Pax/year (2050)	2025–2030  2031–2050	16,578  -	State's Budget Others  State's Budget Others	ACV  ACV
A7	Da Nang International Airport (Da Nang)	To develop new terminal with expansion of apron stands, installation IATA One ID system. Passenger Capacity: 10.0 Mil Pax / Year (Existing) → 25.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 25 Mil Pax/year (2030) → 30 Mil Pax/year (2050)	2021–2025  2031–2050	19,963  -	State's Budget Others  State's Budget Others	ACV  ACV
A8	Chu Lai International Airport (Quang Nam)	To develop new terminal with expansion of apron stands. To construct New Runway for Code E, F aircraft. Passenger Capacity: 1.2 Mil Pax / Year (Existing) → 5.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. To construct additional Runway and connecting taxiways for Code E aircraft. Passenger Capacity: 5 Mil Pax/year (2030) → 12 Mil Pax/year (2050)	2021–2025  2031–2050	10,579  -	State's Budget Others  State's Budget Others	ACV  ACV

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
		taxiways for Code E and F aircraft. Passenger Capacity: 5 Mil Pax/year (2030) → 28 Mil Pax/year (2050)			Others	
A9	Cam International Airport (Khanh Hoa)	To develop new terminal with expansion of apron stands. Passenger Capacity: 5.1 Mil Pax / Year (Existing) → 25.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 25 Mil Pax/year (2030) → 36 Mil Pax/year (2050)	2021-2025 2031-2050	23,760 -	Others Others	ACV ACV
A10	Long International Airport (Dong Nai)	Construction New Airport to operate Code F aircraft. Passenger Capacity: 25.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. To construct additional Runway and connecting taxiways for Code E and F aircraft. Passenger Capacity: 25 Mil Pax/year (2030) → 100 Mil Pax/year (2050)	2021-2025 2031-2050	109,000 -	State's Budget Others State's Budget Others	ACV ACV ACV ACV
A11	Tan Son Nhat International Airport (HCM City)	To develop new terminal with expansion of apron stands. To construct parallel taxiway, installation IATA One ID system. Passenger Capacity: 28.0 Mil Pax / Year (Existing) → 50.0 Mil Pax/Year (2030)	2021-2025 2031-2050	12,691 -	State's Budget Others State's Budget Others	ACV ACV ACV ACV
A12	Can Tho International Airport (Can Tho)	To develop new terminal with expansion of apron stands. To construct additional connecting taxiways. Cargo Capacity: 550,000 ton/year (2030) → 800,000 to 1Mil ton/year (2050) To develop new terminal with expansion of apron stands. To construct parallel taxiway. Passenger Capacity: 3.0 Mil Pax / Year (Existing) → 7.0 Mil Pax/Year (2030)	2025-2030 2031-2050	7,426 -	State's Budget Others State's Budget Others	ACV ACV ACV ACV
A13	Phu Quoc International Airport (Phu Quoc)	To develop new terminal with expansion of apron stands. Passenger Capacity: 7 Mil Pax/year (2030) → 12 Mil Pax/year (2050) To develop new terminal with expansion of apron stands. To construct New Runway for Code E aircraft. Passenger Capacity: 4.0 Mil Pax / Year (Existing) → 10.0 Mil Pax/Year (2030)	2025-2030 2031-2050	9,595 -	State's Budget Others State's Budget Others	ACV ACV ACV ACV
A14	Lien Khuong International Airport (Lam Dong)	To develop new terminal with expansion of apron stands. Passenger Capacity: 10 Mil Pax/year (2030) → 18 Mil Pax/year (2050) To develop new terminal with expansion of apron stands. To construct Parallel Taxiway Passenger Capacity: 2.0 Mil Pax / Year (Existing) → 5.0 Mil Pax/Year (2030)	2025-2030 2031-2050	4,591 -	State's Budget Others State's Budget Others	ACV ACV ACV ACV
A15	Lai Chau Airport (Lai Chau) 3C	To develop new terminal with expansion of apron stands. Passenger Capacity: 5 Mil Pax/year (2030) → 7 Mil Pax/year (2050) To construct New Airport to operate Code C aircraft. Passenger Capacity: 0.5 Mil Pax/Year (2030)	2025-2030 2031-2050	4,350 -	State's Budget Others State's Budget Others	(ACV) (ACV) (ACV) (ACV)
A16	Dien Bien Airport (Dien Bien)	To develop new terminal with expansion of apron stands. To extend Runway 1830m to 2400m Passenger Capacity: 0.3 Mil Pax / Year (Existing) → 2.0 Mil Pax/Year (2030) To improve existing terminal and expansion Apron stands. Passenger Capacity: 2 Mil Pax/year (2030) → 3 Mil Pax/year (2050)	2021-2025 2031-2050	3,100 -	State's Budget Others State's Budget Others	ACV ACV ACV ACV
A17	Sa Pa Airport (Lao Cai) 4C	To construct New Airport to operate Code E aircraft. Passenger Capacity: 3.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 3.0 Mil Pax/year (2030) → 5.0 Mil Pax/year (2050)	2025-2030 2021-2030	4,200 -	State's Budget Others State's Budget Others	(ACV) (ACV) (ACV) (ACV)

No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
A18	Na San Airport (Son La) 4C	Construction New Airport to operate Code C aircraft. Passenger Capacity: 1.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 1.0 Mil Pax/Year (2030) → 2.0 Mil Pax/Year (2050)	2025–2030 2031–2050	5,688 -	State's Budget Others	(ACV) (ACV)
A19	Quang Tri Airport (Quan Tri)	To construct New Airport to operate Code C aircraft. Passenger Capacity: 1.0 Mil Pax/Year (2030) To improve existing terminal and expansion Apron stands. Passenger Capacity: 1.0 Mil Pax/Year (2030) → 2.0 Mil Pax/Year (2050)	2025–2030 2031–2050	3,885 -	S State's Budget Others	(ACV) (ACV)
A20	Pleiku Airport (Gia Lai)	To develop new terminal with expansion of apron stands. To extend Runway for operation Code C and D aircraft. Passenger Capacity: 0.6 Mil Pax / Year (Existing) 4.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 4.0 Mil Pax/Year (2030) → 5.0 Mil Pax/Year (2050)	2025–2030 2031–2050	4,583 -	State's Budget Others	ACV ACV
A21	Phu Cat Airport (Binh Dinh)	To develop new terminal with expansion of apron stands. Passenger Capacity: 1.4 Mil Pax / Year (Existing) 5.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 5.0 Mil Pax/Year (2030) → 7.0 Mil Pax/Year (2050)	2025–2030 2031–2050	2,864 -	Others Others	ACV ACV
A22	Tuy Hòa Airport (Phu Yen)	To develop new terminal with expansion of apron stands. Passenger Capacity: 0.55 Mil Pax / Year (Existing) 3.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 3.0 Mil Pax/Year (2030) → 5.0 Mil Pax/Year (2050)	2025–2030 2031–2050	1,385 -	Others Others	ACV ACV
A23	Buon Ma Thuot Airport (Dak Lak)	To develop new terminal with expansion of apron stands. To construct Parallel Taxiway Passenger Capacity: 2.0 Mil Pax / Year (Existing) 5.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands. Passenger Capacity: 5.0 Mil Pax/Year (2030) → 7.0 Mil Pax/Year (2050)	2025–2030 2031–2050	3,814 -	State's Budget Others	ACV ACV
A24	Phan Thiet Airport (Binh Thuan) 4C	To construct New Airport to operate Code C aircraft. Passenger Capacity: 2.0 Mil Pax/Year (2030) To improve existing terminal and expansion Apron stands. Passenger Capacity: 2.0 Mil Pax/Year (2030) → 3.0 Mil Pax/Year (2050)	2025–2030 2031–2050	7,714 -	State's Budget Others	(ACV) (ACV)
A25	Dong Hoi Airport (Quang Binh)	To develop new terminal with expansion of apron stands. Passenger Capacity: 0.5 Mil Pax / Year (Existing) 3.0 Mil Pax/Year (2030) To improve existing terminal and expansion Apron stands. Passenger Capacity: 3.0 Mil Pax/Year (2030) → 5.0 Mil Pax/Year (2050)	2025–2030 2031–2050	2,804 -	Others Others	ACV ACV
A26	Rach Gia Airport (Kien Giang)	To expand Apron stands. To extend Runway for operation Code C and D aircraft. Passenger Capacity: 0.25 Mil Pax / Year (Existing) → 0.5 Mil Pax/Year (2030) To improve existing terminal and expansion Apron stands. Passenger Capacity: 0.5 Mil Pax/Year (2030) → 1.0 Mil Pax/Year (2050)	2025–2030 2031–2050	4,454 -	State's Budget Others	ACV ACV
A27	Ca Mau Airport (Ca Mau)	To develop new terminal with expansion of apron stands. To extend Runway for operation Code C aircraft. Passenger Capacity: 0.2 Mil Pax / Year (Existing) 1.0 Mil Pax/Year (2030) To develop new terminal with expansion of apron stands.	2025–2030 2031–2050	3,117 -	State's Budget Others	ACV ACV



No.	Name	Short Description	Schedule	Cost (billion VND)	Source	Organization
A28	Con Dao Airport (Ba Ria - Vung Tau)	Passenger Capacity: 1.0 Mil Pax/year (2030) → 3.0 Mil Pax/year (2050) To develop new terminal with expansion of apron stands. Passenger Capacity: 0.4 Mil Pax / Year (Existing) → 2.0 Mil Pax/Year (2030) To improve existing terminal and expansion Apron stands. Passenger Capacity: 2.0 Mil Pax/year (2030) → 3.0 Mil Pax/year (2050)	2021-2025 2031-2050	1,605 -	Others Others	ACV ACV
A29	Cao Bang Airport (Cao Bang)	To construct New Airport to operate Code C aircraft. Passenger Capacity: 2.0 Mil Pax/Year (2050)	2031-2050	-	State's Budget Others	(ACV)

## 付録 10.1: 南北高速道路西ルート(南側)

### 1) プロジェクトの背景

1. 南北に長く国土が広がり、ハノイ市、ホーチミン市の 2 大都市圏を接続する南北軸の高速化はベトナム国の全国幹線道路網整備計画において最も主要な事業の一つである。南北軸は国家重要事業として 2016 年 3 月 1 日の首相決定第 326 号にて 2020 年までの幹線国道整備計画、2030 年までの方針の中で東ルートと西ルートが挙げられている。西ルートについては 1,269 km が計画延長として示されており、南側区間は Ngoc Hoi - Chon Thanh - Rach Gia 区間として 785km と記載されている。
2. 南北高速道路東ルートは 2025 年までの全線開通を目標に整備が進められているところであり、ホーチミン道路は 2020 年に全線の改良工事を完了し、急峻な道路線形や防災対策がなされている。ただし、ホーチミン道路の北部エリアでは依然として落石、表層崩壊の危険性および急こう配区間の存在が残っているということである。以下に改良されたホーチミン道路の状況を示す。



出典: HDPRO LAND, <https://hdproland.com/posts/duong-ho-chi-minh>

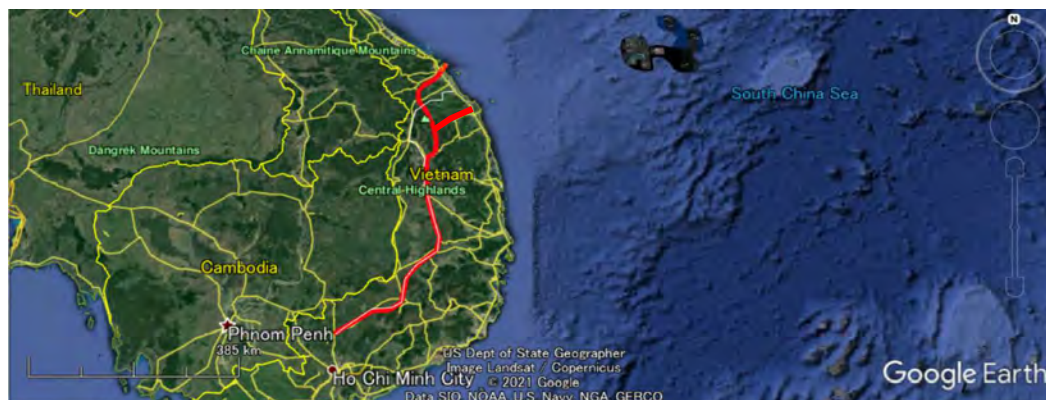
図: 改良されたホーチミン道路の状況

3. 高速道路整備が進められている南北高速道路東ルートは 4 から 6 車線で整備が進められており、また国道 1 号が並行して存在する。一方西側ルートの幹線道路はホーチミン道路のみであり、かつ高速道路としての機能は有していない。また、本路線は西側沿線の地域の日常的な移動にも利用されることから様々な目的な交通が混在する状況と考えられる。また、ホーチミン道路が災害等により不通になった場合はその代替路の確保は、山地部に立地していることも考慮すると難しい状況である。また、南北高速道路東側ルートに不通区間が発生した場合など長距離移動の交通の代替路としての機能は、車線数、線形、一般交通との混在を考慮すると十分ではないと考えられる。
4. また、南北高速道路西ルートは山地部に位置し、東側の沿岸地域に比較すると地域開発も進んでいないエリアである。一方、ラオス国、カンボジア国との国境とは近い国際経済交流を含めて地域の開発が望まれる地域でもある。
5. このような南北軸の多重性、国際交流の促進および沿道地域の経済的発展を目的として南北高速道路西ルート(南側)の整備を優先プロジェクトとして選定する。

### 2) プロジェクト計画地

6. 南北高速道路西ルートは、北側はダナン市、クアンガイ市に接続し、南側はビンフック省でホーチミン市を中心とした放射状高速道路に接続するルートである。詳細なルートは確定して

いないが、下図のようなルートが構想されている。また、延長は約 700 から 800km 程度と想定される。



出典: 調査団

図: 南北高速西ルート(南側)平面線形図

### 3) 事業の目的と役割

7. 南北高速道路西ルート(南側)は以下のような機能が期待される。
  - (i) 南北軸の多重化
  - (ii) 沿線地域の経済的発展
  - (iii) ラオス国、カンボジア国国境とホーチミン市都市圏のアクセス性改善

### 4) 整備計画時期

8. 南北高速道路西ルート(南側)は東側ルートの全線開通および東西軸の整備計画時期を勘案し、2030-2050年の期間の開通を計画するが、首相決定第326号(2016年3月1日)の2030年の方針にも示されていること、代替路線機能を発揮するためには2030年代の開通が期待される。

### 5) 整備対象路線としての位置づけ

9. 南北高速西ルート(南側)は先の首相決定でも示されていることから国家プロジェクトとしての位置づけはなされている。今後は高速道路としての起終点、経由地、車線数、設計速度、インターチェンジ箇所、線形の決定、設計、積算、用地買収を進めていくことになる。

### 6) 南北高速道路西ルート(南側)整備に関する課題

10. 南北高速道路西ルート(南側)は山地部を通過するルートであるが、起終点の標高に対して最高地点で1,800m程度の標高差があることや多くの起伏があるルートを通過することになることが想定される。



出典: 調査団

図: 南北高速西ルート(南側)地形縦断面図

11. 南北高速道路西ルート(南側)は山地部を通過するルートであり、高速道路の平面、縦断計画の基準を満たすためには以下のような施工および運営管理上の課題が想定される。またホーチミン道路が抱えるように防災面の対策も必要になることが想定される。さらにこれらの技術的課題に加えて、長大構造物が多くなるため工事費が嵩むことも想定される。具体的には以下のような課題が想定される。

- (i) 長大トンネルの設計と建設
- (ii) 長大トンネルの日常管理と非常用管理体制
- (iii) 高橋脚の長大橋の整備と管理
- (iv) トンネルと橋梁が交互に複数連続する施工
- (v) 多くの斜面防災対策
- (vi) これらの構造物のかかる事業費の確保
- (vii) 全国的に決められている通行料料金体系による通行料収入による採算性の考え方と対応

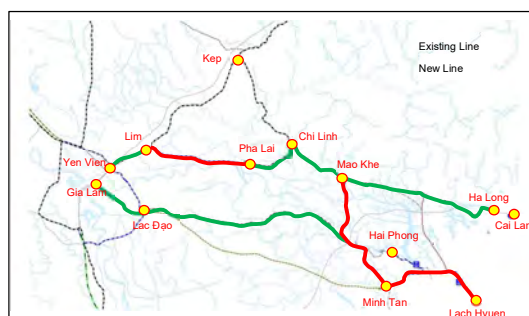
## 7) 課題に対する対応策の提案

12. ベトナム国では長大トンネルの施工、運用に関して、日本の ODA で整備したハイバントンネルが代表例としてある。これらの経験もあるが、地山状況が異なる場合にはその対策工など当該路線の状況に応じた設計や施工方法の選定が必要になる。このようなベトナム国ではまだ経験数の少ない特殊工事が想定されるトンネル事業では積極的に日本の経験を活用することが望まれる。
13. ベトナム国にも長大橋は多く整備されてきているが、山地部の高橋脚の長大橋はまだ少ない状況である。日本では山地部の高速道路では多くの経験を有していることから、供用後の維持管理の容易性も考慮した形式の選定などライフサイクルを考えた日本の経験を活用することが望まれる。
14. 防災対策については、特に南北高速道路西ルートは代替路線として機能できる道路はホーチミン道路のみであることから事前の調査から施工中の観察を含めて予防的に対策することが望まれる。これらについても多くの山地部の高速道路を有する日本の経験を活用することが望まれる。
15. 多くの構造物が想定される山地部の高速道路ではその工事費および維持管理に要する費用が多くなることが想定される。さらに当該地域は大都市部に比べて交通需要は小さいことも予想されることから、均一の料金体系の場合には通行料収入だけではその事業性の確保は難しいことが一般的である。また、代替路線も少ないことから容易に通行料金を高くすることは高速道路ネットワークの充実と社会経済成長を支援するという機能から判断すると望ましくない場合もある。このような幹線道路網を構築する上で必要かつ比較的早期整備が望まれる路線については ODA 資金を活用して整備を進めることが有効な策一つであると考えられる。

## 付録 10.2: Lach Hyuen 港接続鉄道開発プロジェクト

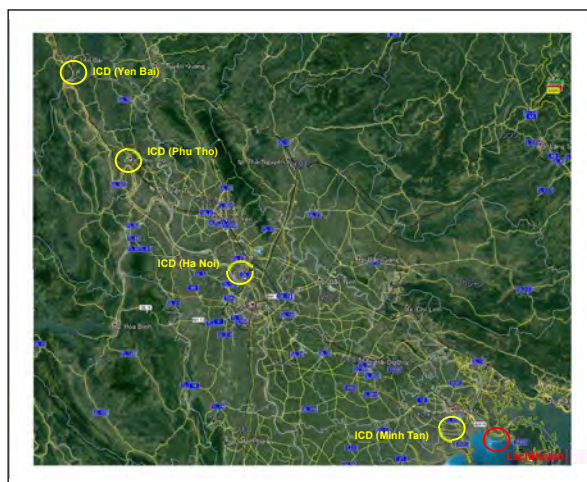
### 1) プロジェクト概況

1. 現在、港湾と内陸部の工業団地等間の貨物輸送は、道路および IWT が大半を占めている。将来の貨物輸送の増加に対応するため、港湾を接続する鉄道の建設を行うと同時に、内陸部の ICD を鉄道と接続させ、モーダルシフトを図る。
2. なお、直結した港湾接続線は鉄道単独での開発は難しい(利用者が限定される)為、鉄道局、港湾局などの関係省庁、港湾荷役事業者、フォワーダー等の関係者は特定目的開発組織 (SPO Special Purpose Organization) について事前に協議設立しておく必要がある。
3. Ha Noi – Hai Phong Line は 2 つの路線が計画されている。Yen Ven – Lim – Pha Lai – Chi Linh – Mao Khe – Ninh Tan – Lack Hyuen 路線と Gia Lam – Lac Dao- Minh Tan 路線である。両路線とも既存線(緑色)と新線(赤色)で構成される。計画路線を図に示す。
4. Lack Hyuen 港の貨物の目的地を考慮すると、Ha Noi – Lao Cai 路線(含む 北部経済圏に近隣する ICD)を同時に開発する必要がある。



出典: 調査団

図: Ha Noi – Lack Hyuen 路線の計画案



出典: 調査団

図: Ha Noi – Lao Cai 路線の ICD 計画案例

### 2) Lach Hyuen 港接続路線の開発工程と検討事項 (2021-2030)

#### (1) 準備段階

- (a) 資金調達スキーム

- (i) SPO の資金調達スキームに関する規制や法律の制定
- (ii) 地方自治体、荷役会社、ベトナム国鉄等の特定目的組織内で開発費分担の合意
- (iii) 第一段階では 鉄道建設はベトナム国鉄、ICD 建設は政府、運営は民間又は PPP が実施する
- (iv) 第二段階では 鉄道建設は港湾関係者しか利用しない為、民間又は PPP が実施する

(b) 土地収用の検討

(c) ICD の検討

## (2) 実行段階 (第一段階)

(a) 既存線の近代化及び更新 (Yen Vien - Mao Kei 間及び Gia Lam - Hai Phong 間)

(b) 建設中新線 (Lim – Pha Lai section)の完成

(c) 土地収用

(d) 港湾の将来開発に適応した鉄道の設計

(e) 標準軌道(1435mm)または三線軌道

(f) 縦断線形、長大橋等

(g) Nam Hai Phong, Ha Noi, Phu Tho and Yen Bai の ICD の設計及び建設

(h) 既存の道路部門の ICD との接続路線及び新規 ICD の開発.

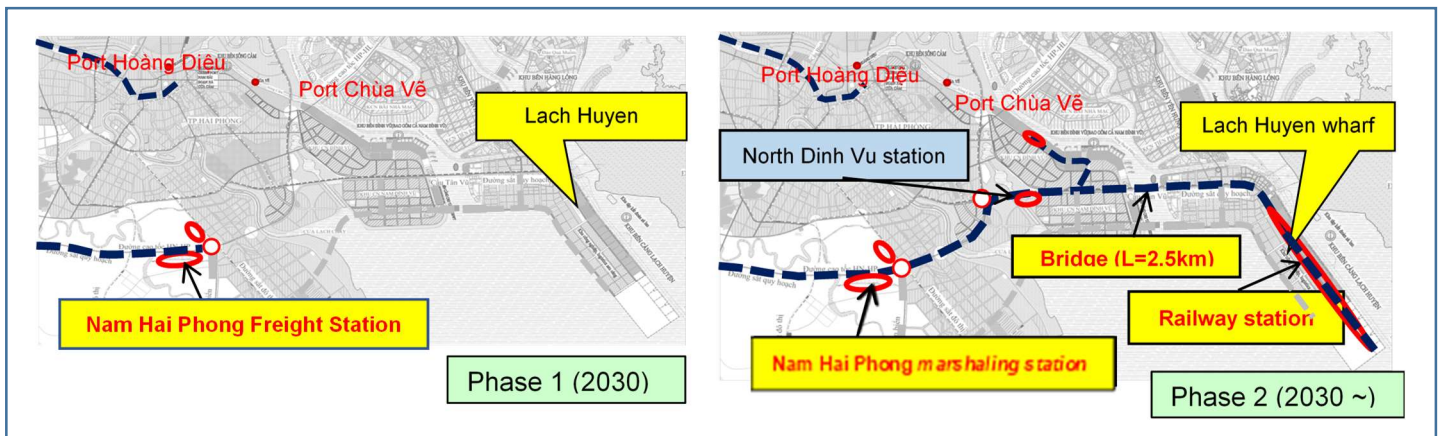
(i) ICD (Nam Hai Phong, Ha Noi, Phu Tho and Yen Bai.)に接続する新しいフィーダー線の設計及び建設

(j) 新線建設 (Mao Kei - Nam Hai Phong 間)

(k) 牽引車両及び貨車の新規購入

## (3) 実行段階 (第二段階)

(a) Nam Hai Phong - Lach Huyen 港接続鉄道の建設



出典: 調査団

図: Minh Tan-Lach Huyen 港路線の段階的開発

5. 開発計画を以下に示す。

表: 開発工程

項番	項目	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	~	2050
1.	準備段階												
(a)	資金調達スキーム												
(d)	土地収用の検討												
(f)	ICDの検討												
2.	実行段階(第一段階)												
(a)	既存線の近代化及び更新 (Yen Vien - Mao Kei間 及びGia Lam - Hai Phong間)												
(b)	建設中新線 (Lim - Pha Lai間)の完成												
(c)	土地収用												
(d)	港灣の将来開発に適応した鉄道の設計												
(e)	Nam Hai Phong, Ha Noi, Phu ThoとYen BaiのICD の設計及び建設												
(f)	ICD (Nam Hai Phong, Ha Noi, Phu ThoとYen Bai) に接続する新しいフィーダー線の設計及び建設												
(g)	新線建設 (Mao Kei - Nam Hai Phong間)												
(h)	牽引車両及び貨車の新規購入												
3.	実行段階(第二段階)												
(a)	Nam Hai Phong - Lach Hyuen港接続鉄道の建設												

出典: 調査団

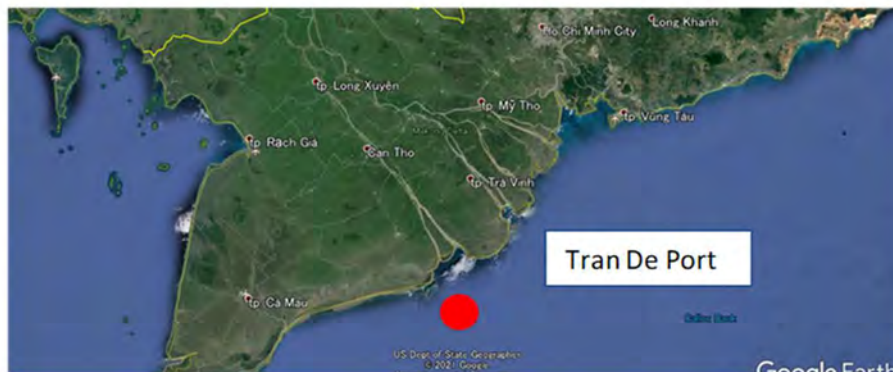
## 付録 10.3: チャンデ港整備プロジェクト

### 1) プロジェクトの背景

1. メコンデルタ地域の面積は約 40.6 千平方キロメートルで国全体の 13%に相当し、総人口は約 1,800 万人である。
2. この地域の主な輸出製品は、水産物、米、加工食品、野菜と果物、繊維、履物、手工芸品などである。その中でも米と水産物は特産物である。水産物の輸出は全国の水産物輸出の 60%以上を占め、米の輸出は全国の輸出量の 90%を占めている。
3. 大量の輸出入貨物を扱っているが、メコンデルタ地域の輸送能力は不十分であり、これらの貨物は、主に道路と内陸水運によって Seaport Group4 の港湾に輸送されている。
4. メコンデルタ地域には、火力発電所が内陸部の河川航路沿いに位置しており、海外(オーストラリア、インドネシア)から石炭を輸入している。河川航路では喫水制限があるため、小型船舶の輸送による高い輸送費を負担している。
5. メコンデルタ地域におけるゲートウェイ港および輸入石炭の積替え港の機能を有する新港の整備が必要となっている。

### 2) プロジェクトの位置

6. チャンデ港整備の候補地はチャンデ河口の沖合である。 次の図にチャンデ港の候補地を示す。



出典: 調査団

図: チャンデ港整備の候補地

### 3) プロジェクト実施の目的

7. チャンデ港に期待される機能は次のとおりである。
  - (i) メコンデルタ地域のゲートウェイ港湾
  - (ii) メコン圏(カンボジア等)のゲートウェイ港湾
  - (iii) 内陸水運との結節点
  - (iv) メコンデルタ地域の発電所用輸入石炭の積替え港湾

### 4) プロジェクトの想定実施期間

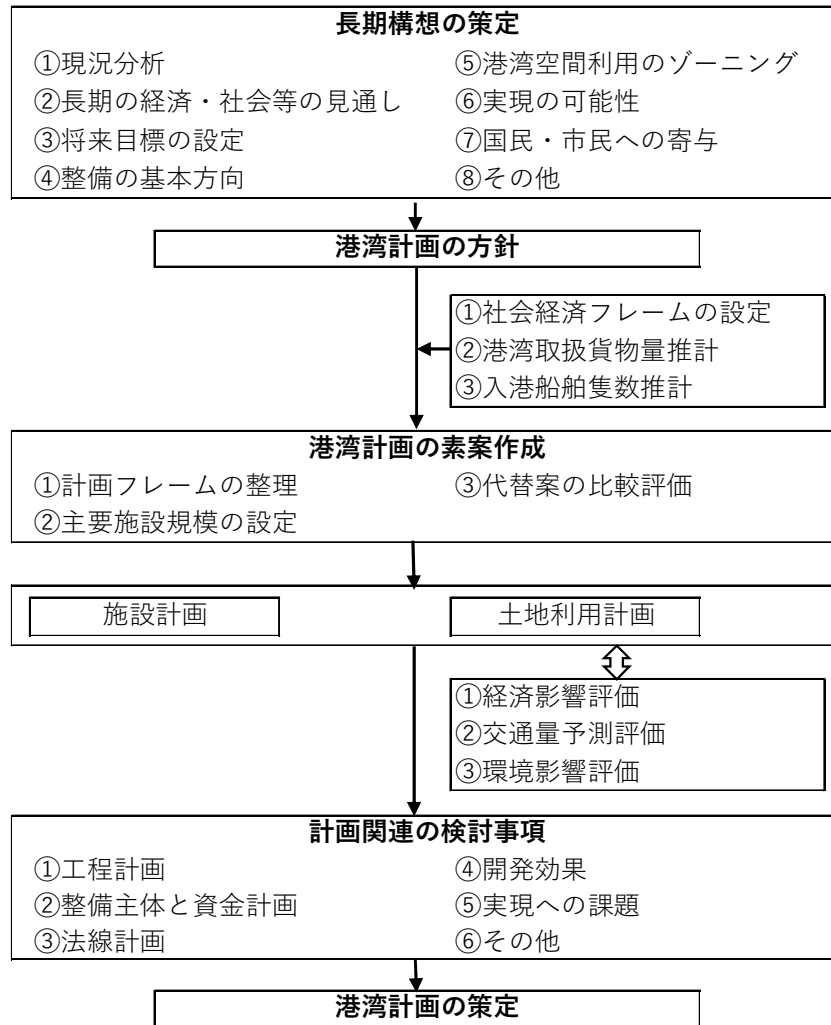
8. プロジェクトの実施期間は 2021 年から 2040 年と想定されている。



## 5) 港湾計画策定の手順

### (1) 港湾計画の作成

9. チャンデ港は全く新しく整備される港湾であるため、白紙の状態から港湾計画を策定する必要がある。港湾計画を策定するには、最初に長期のコンセプトを作成し、それから必要な項目を段階的に慎重に検討することが重要である。港湾計画の策定手順を次のフローチャートに示す。



出典: 調査団

図: 港湾計画策定のフローチャート

### (2) 地域開発計画との整合性

10. チャンデ港がメコンデルタ地域のゲートウェイ港として機能するためには、地域開発計画等を十分に検討し、関連する要素を港湾計画に取込むことが重要である。

#### (a) 地域の交通整備計画

11. メコンデルタ地域の道路ネットワーク、内陸水運ネットワーク、沿岸輸送ネットワークとの効率的な接続が不可欠である。メコンデルタ地域の交通計画も、チャンデ港の機能が十分に活用されることを前提において策定されることが必要である。

(b) 地域の産業開発計画

12. メコンデルタ地域の工業団地整備計画、物流センター整備計画、発電所整備計画等を慎重に検討し、チャンデ港整備計画に反映させることが重要である。

(3) 代替案の検討

13. チャンデ港をメコンデルタ地域のゲートウェイ港として開発する案の代案として、Seaport Group 4 のブンタウ港をハブ港として活用する案も考えられる。次の図は、チャンデ港とブンタウ港がメコンデルタ地域のハブ港として、それぞれ機能する場合の物流フローイメージの違いを示す。



出典: 調査団

図: 2つのハブ港からの物流イメージの比較

6) チャンデ港整備プロジェクトを進めるための課題

14. チャンデ港整備プロジェクトを実施するためには、多くの課題があり、十分な調査と検討が必要である。

- (i) 適切な港湾設置場所と港湾規模の検討
- (ii) 厳しい自然条件における港湾構造物・施設的设计
- (iii) 大水深かつ厳しい自然条件における港湾建設技術
- (iv) 厳しい自然条件における港湾施設の維持管理
- (v) 公共セクター・民間セクターの分担スコープ分け

7) プロジェクトの採算性の検討

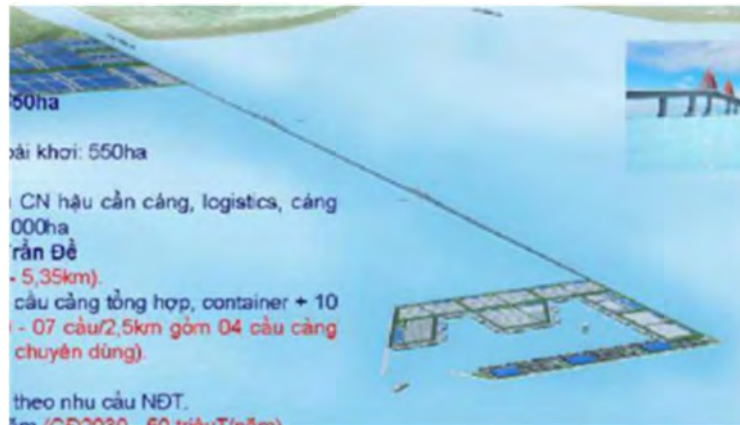
15. プロジェクトを実施するかどうかを決定する上での重要な検討ポイントは、国民経済への便益の観点からプロジェクトの採算性を確認することである。チャンデ港の整備プロジェクトの実施によって、主に次の3つの便益が見込まれる。

- (i) 貨物を Seaport Group4 の港湾へ運搬する陸上輸送コストの削減効果
- (ii) 貨物の輸送時間の短縮効果
- (iii) 大型船による輸入石炭の運搬コストの削減

16. 2015年の JICA 報告書:ベトナム国メコンデルタ地域における火力発電所用の石炭積替えターミナル FS 調査によると、石炭の輸入運搬船を小型船から大型船に切り替えることによる

コスト差はとて大きいことが示されている。

17. 石炭はオーストラリアとインドネシアから輸入されているため、石炭輸入に大型船を導入することによって生じる便益は大きい。海上輸送コストを削減することで、プロジェクトの採算性を確保できる可能性がある。石炭の輸入ソース毎の輸入量を含めて貨物量予測を精度を高めで行うことが必要である。



出典: CMB Report

図: チャンデ港の整備イメージ