

# Final Resettlement Monitoring Report

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## **VIE: Renewable Energy Development and Network Expansion and Rehabilitation for Remote Communes Sector Project**

### **Sub-project: So Vin Hydropower Project**

Prepared by Northern Power Corporation (NPC) - Power Development Project Management  
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## **ABBREVIATIONS**

ADB	Asian Development Bank
AH	Affected Household
CPC	Commune People's Committee
NPC	Northern Power Corporation
PC	Power Corporation
PPC	People's Committee
LFDC	Land Fund Development Center
DMS	Detailed Measurement survey
RP	Resettlement Plan
LURC	Land Use Rights Certificate
NR	Natural Resources
FFC	Fatherland Front Committees

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## **I. INFORMATION OF THE PROJECT**

### **1. General introduction**

1. The So Vin hydropower project is a sub-project of Loan 2517-VIE: Renewable Energy Development and Network Expansion and Rehabilitation for Remote Communes Sector Project which is funded by the Asian Development Bank (ADB). The implementing agency of this sub-project is Northern Power Corporation (NPC).

2. The objective of the project is to expand and improve the grid for remote villages and areas located in Son La provinces helping to reduce poverty toward improved live standards for local people helping to reduce poverty toward improved live standards for local people, contributing to improving living conditions and income for local people, especially ethnic minorities. These objectives shall be achieved by electricity supply; construction and renovation of an electrical system to provide power to communes, households without electricity through the national grid and improving the quality of supplied electricity to households already having electricity under the two project provinces; Therefore, the project shall help to improve the efficiency of rural electricity business enhancing power grid reliability.

3. The So Vin hydropower plant is constructed for rural electric system in To Mua Commune, Van Ho District, Son La Province.

4. Main work items:

The So Vin Hydropower sub-project will have 2.8 MW generating capacity and an annual average electricity production of 10.65 million kWh. The main elements are shown in Figure 1 and 2 and described as follows:

- a. A dam with maximum height of 13 m;
- b. A penstock of 1.388 m in length, pipe section of 0.8 m and pipe-thickness from 0.6 to 1.0 cm;
- c. A powerhouse with two pelton - horizontal turbines;
- d. Outdoor electricity distribution station;
- e. A 35-KV transmission line to transfer electricity to the national grid through Moc Chau; and
- f. Administration and management building

5. Below the dam, all the project components are on the right bank of the So Vin river. The power from the So Vin hydropower plant will provide electricity to the To Mua, Muong Te, Suoi Bang Commune with a population of 10,815 persons, 90% of which are ethnic Thai.

6. Based on the grid and the load in the area of Moc Chau District, Son La province, where plans to build So Vin hydropower project, now available 35KV line (374 way) from Song Khua departed to Quang Minh. With state of the grid and the load in such areas, the analysis combined with calculations using formulas STILL, we see most reasonable connection options are investors of So Vin hydropower project should agree with local electricity connection to 35KV line (374 Way) above.

7. So Vin hydropower project is designed has step-up substation 6.3/35 KV, transmission line 35KV, single circuit, conducting wire AC -50 with length of 420m connected to the column No. 61/94/7.

8. The water delivery system of the dam has a calculated head of 264.46 m, which is designed to deliver a maximum of 1.28 m<sup>3</sup>/s to two turbines and generate 2.8 MW of power. As a result of the project, in the dry season, the So Vin River will experience loss of water flow for approximately eight to nine months over the 1.0 km of the river between dam and powerhouse.

9. During low flow months with a flow rate of less than 0.09 m<sup>3</sup>/s, the plant will operate for only a few hours per day to provide for peak hour power requirements. The water regime will change immediately downstream of the dam.

10. Various access roads are required by the project:

- a. At the dam, 400m of road with the upgrading of existing track road and about 200m temporary road on right and left bank for temporary construction access;
- b. For powerhouse, upgrading of the existing 1.8km track road to provide permanent access to the plant; and
- c. A 1,400-m track road along the penstock route for construction purposes.

11. In addition to the main components, there are also auxiliary components for the So Vin Hydropower project which are described in the table below:

Components	Area (ha)
Reservoir	2.6
Focal Dam	0.3
Penstock	1.3
The plant, operating manager	0.4
Line	0.1
Road operation	0.1
Work area, camp of construction workers	1.6
Temporary road construction serves	1.2

12. The proposed campsite is between the area above Bo Mong village. The campsite is close to local communities in Bo Mong village.

## 2. Project components

**Table 01: Tender Package Name/Lot**

Construction Package	Description of work item in the package	Location
NPC-ADB -SV/W01	Construction of 35 kV line, 35/0.4 kV substation for un-electrified households	To Mua, Suoi Bang commune, Van Ho district, Son La Provinces
NPC-ADB-SV/W02	Construction of 0.4kV line for un-electrified households	To Mua, Suoi Bang commune, Van Ho district, Son La Provinces
NPC-ADB –SV/W03	Construction of head works, intake and pipe	To Mua commune, Van Ho district, Son La Provinces

Construction Package	Description of work item in the package	Location
NPC-ADB –SV/W04	Supply and installation of hydro-mechanical equipment. Construction hydroelectric plants and the discharge channel; OPY station penstock; operational managers; road construction operation.	To Mua, Muong Te commune, Van Ho district, Son La Provinces

### 3. The scope and impact of the project

#### Temporary effects:

13. There are no temporary effects.

#### Permanent effects:

14. There are 106 affected households, no household is severely AHs. All of 106 AHs are Ethnic Minority, in which 54 AHs are poor AHs and 02 AHs are women headed AHs. The number of AH by commune is in table 2 below:

**Table 02: Number of households affected by the project**

No.	Component/ packages	Number of Vulnerable AHs			Total AHs
		# poor AHs	Ethnic minority AHs	# women headed AHs	
	<b><u>So Vin Hydropower Project</u></b>	<b>54</b>	<b>106</b>	<b>2</b>	<b>106</b>
	<b><u>To Mua Commune</u></b>	<b>19</b>	<b>44</b>		<b>44</b>
<u>1</u>	<u>Bo Mong Village</u>	9	16	-	16
<u>2</u>	<u>Da Mai Village</u>	6	8		8
<u>3</u>	<u>Dao Village</u>	1	1		1
<u>4</u>	<u>Lien Hung Village</u>	3	19		19
	<b><u>Muong Te Commune</u></b>	<b>30</b>	<b>55</b>		<b>55</b>
<u>1</u>	<u>Hao Village</u>	25	45	2	45
<u>2</u>	<u>Hang Village</u>	1	5	-	5
<u>3</u>	<u>Hua Pu Village</u>	4	5		5
	<b><u>Suoi Bang Commune</u></b>	<b>5</b>	<b>7</b>		<b>7</b>
<u>1</u>	<u>Suoi Khau Village</u>	2	4		4
<u>2</u>	<u>Bo Village</u>	3	3		3

15. The total permanently affected land area is 77,884.6 m<sup>2</sup> of which 26,395 m<sup>2</sup> of forest land, 155.7 m<sup>2</sup> of residential land. 51,333.9 m<sup>2</sup> of agricultural land. Permanently affected land is used for construction dams, reservoirs, plants and sugar mills.

**Table 03: Acquired land area by commune**

No,	Packages/components/ subprojects	Permanently acquired land area (m <sup>2</sup> )			
		Agricultural land	Residential land	Forest land	Total
<b>I</b>	<b><u>So Vin Hydropower</u></b>	<b>51,333.90</b>	<b>155.70</b>	<b>26,395.00</b>	<b>77,884.60</b>

	<b>Project</b>				
<b>1</b>	<b><u>To Mua Commune</u></b>	<b>20,969.60</b>	<b>0.00</b>	<b>21,162.30</b>	<b>42,131.90</b>
1.1	<u>Bo Mong Village</u>	20,717.60		21,162.30	41,879.90
1.2	<u>Da Mai Village</u>	96			96
1.3	<u>Dao Village</u>	10			10
1.4	<u>Lien Hung Village</u>	146			146
<b>2</b>	<b><u>Muong Te Commune</u></b>	<b>30,237.30</b>	<b>155.70</b>	<b>5,232.70</b>	<b>35,625.70</b>
2.1	<u>Hao Village</u>	22,357.70	155.7	5,232.70	27,746.10
2.2	<u>Hang Village</u>	7,799.60			7,799.60
2.3	<u>Hua Pu Village</u>	80			80
<b>3</b>	<b><u>Suoi Bang Commune</u></b>	<b>127</b>			<b>127</b>
3.1	<u>Bo Village</u>	68			68
3.2	<u>Suoi Khau Village</u>	59			59

16. Trees and crops affected by the project are include 50,250 m2 crops and 508 trees and detail by commune in table 4 below

17. There is no affected structure by this porject.

**Table 04: Affected Trees and crops**

<b>N o.</b>	<b>Packages/ components/ subprojects</b>		<b>Affected crops (m<sup>2</sup>)</b>	<b>Affected trees (cây)</b>	<b>Others</b>
	<b><u>So Vin Hydropower Project</u></b>	Van Ho District	50,250	508	511
A	To Mua Commune				
1	Bo Mong Village	To Mua Commune	41,839	411	
B	Muong Te Commune				
1	Hao Village	Muong Te Commune	8,411.30	97	511

#### **4. Objectives of the resettlement completion report**

18. The completion report is prepared to: (a) determining whether the payment of compensation and assistance to AHs has been implemented as planned in the Resettlement Plan (RP); (b) evaluating whether the objectives of the resettlement plan have been achieved; (c) Verify whether the RP with proposed mitigation measures ensures the fairness and provides assistances for APs in order to improve, or at least restore their living standards to the pre-project level; (d) Evaluate the effectiveness, impacts, and sustainability of the resettlement for Project. (e) Provide recommendations for the resettlement implementation of the next components of the Project (if any) and lessons learned,

## **II. RESULTS OF THE IMPLEMENTATION OF COMPENSATION AND RESETTLEMENT:**

### **1. Information disclosure and public consultation:**

19. During the project implementation project infomation and approved documents have been disclosed by Son La PMU, Van Ho District People's Committee, including CPCs. The time for the information disclosure is from November 2014 and continue during the implementation: during DMS,

when implementation of compensation and land clearance. In addition, during the project implementation process, localities have conducted information dissemination and community consultation through different ways such as community meetings, delivery of leaflet, pasting notices at CPCs/village and through local loudspeaker. The information has been disseminated including:

- i. Detailed design of subproject's policies, those eligible for compensation and resettlement assistance.
- ii. The DMS, sub-project impact, eligibility particularly on the cut-off dates for this sub-project, grievance redress mechanism;
- iii. Mechanisms of payment, and grievance redress.
- iv. Consulting on the replacement cost, compensation payments and other entitlements of AHs as well as the additional assistance and allowances to the severely affected households, affected vulnerable group;
- v. Gender and vulnerable group issues;
- vi. Implementation schedule

20. Public consultations meetings have been conducted for each project commune in June 2016 with the participation of local government, women unions, affected households in order to disseminate and publicize information about the project content and feedbacks from communities and AHs.

21. All local authorities and people are very supportive of the project since the project aims to practical benefits for local people. The compensation for site clearance expected to be implemented properly to satisfy affected households.

## **2. Detail measurement survey:**

22. DMS have been conducted by the District Land Fund Development Centre with procedure, as follows:

+ The affected households are required to declare the information including demographics, affected assets (land, property, trees and crops). Affected households submit a declaration accompanying legal documents (land certificates, paper allocation of organs for household functions, certified by the CPC, tax receipts ...).

+ Land Fund Development Centre at district and other relevant agencies such as CPC, District Natural Resources and Environment, representatives of the investor verify and compare the information provided by the affected households with the document maintained by the CPC, to appraise the legality of affected assets.

+ Based on results from the verification of the origin and legal status for the land and assets of affected households, Land Fund Development Centre at district in cooperation with the CPC organize a survey to identify affected assets in details to verify declared contents of land and property on land and come to an agreement with affected households agreed on the damaged property. The verification minutes is made and signed by a representative of affected households, the participants and certified by the local authorities.

## **3. Prepare compensation plan:**

23. District Land Fund Development Centre prepared compensation plan based on the DMS data, the legal status of land, the replacement cost for affected asset, and assistance according to RPF.



- + Households with affected land and assets in the safe corridor: The project has 106 permanently AHs. Affected rice and annual crops of affected area was compensated in cash at market values based on the average production over past 3 years. Affected area in the safety corridor is compensated at replacement cost. Affected trees within the safety corridor with height of over 4m are compensated at the market price at the time of compensation. Affected trees and crops affected during the construction and installation process, is paid by the construction contractor. The compensation rates are calculated upon tree type and age and agreed between the construction contractor and all affected households.
- + Permanently affected land and assets in the construction zone of substations and pole foundations the factory, penstock, surge tank, dam clues belong to each household is very small. Affected land is compensated at replacement cost. Annual crop and trees are compensated in cash at market price at the time of compensation. Trees are compensated on the basis of tree type and age. Temporarily affected area during the foundation construction are restored; cleaned and returned to the owner.

24. Approved compensation plan is publicly posted in CPC's offices and living residential areas so that AHs can give their comments and feedback. The publication and posting was made in a record certified by the CPC representatives, representatives of the Commune Fatherland Front Committee, representatives of those who have acquired land.

25. The time for posting and receiving comments is at least 20 days from the date of posting. then, LFDCs collect all comments, then if there are different opinions compared to the plan for compensation, assistance and resettlement, there must be adjustment on the original plan (if any); completing the revised plan and submitting it attached comments to the Natural Resources and Environment division for evaluation.

26. Most of the affected households have agreed with the published clearance compensation.

27. After finishing the plan for compensation, support and resettlement, District Natural Resource and Environment Division in coordination with other relevant agencies to conduct the evaluation. After the evaluation and adjustment, DPC approve the plan based on the request from District Natural Resource and Environment Division. Throughout the project, the time of approval of each district is different. Total value of land clearance compensation (including the cost to the affected households and to local organizations) under the approved plan for the project were VND 3,955,979,220 million. The date of decision on approving the plan stated in the official is different with actual time of approving the plan, the date stated in the official decision presents the time parties agreed on the compensation value and rate.

28. Announcement of the plan for compensation, support and resettlement: The district Land Fund Development Centre is responsible for coordinating with the CPCs, Son La PC to have notification and public posting of the approved compensation plan at the CPC offices and living residential areas where land is acquired; The decision on compensation, assistance and resettlement for affected households specify the level of compensation, support, time and place of payment of compensation, assistance and time for handover land for clearance have been sent to affected households.

29. After the announcement of approved compensation plan by DPC, LFDC paid to AHs according to approved compensation plan.

#### **4. Compensation costs:**

30. Compensation unit price was issued by decisions of Son La PPC. As no market price of agriculture land, PPMU have consulted with AHs and they agreed with this prices of compensation.

31. PC Son La implements payment of compensation and assistance to AHs in accordance with the approved compensation plan that was prepared based on DMS, and approved RPF.. 100% of

the surveyed AHs indicated that they agreed and were satisfied with the unit prices for compensation and assistance delivered by the project.

32. The payment to affected land and assets is implemented in accordance with the approved compensation plan and with complete payment vouchers and signed by AHs. Full payment of compensation/ assistance are certified by the local authorities. All affected households are informed of the time and place of payment. The payment has to be done quickly through simple procedures and convenient for beneficiaries. Until now 3,955,979,220 million VND has been paid for 106 affected households.

**Table 05: Status of compensation payment**

Packages/components/subprojects	Status of compensation payment		Status of site clearance	
	# of AHs received compensation	# of AHs refuse compensation	# of AHs received compensation	# of AHs do not hand over land
<b>So Vin Hydropower Project</b>	<b>106</b>	<b>0</b>	<b>106</b>	<b>0</b>
Bo Mong Village, To Mua Commune	16	0	16	0
Da Mai Village, To Mua Commune	8	0	8	0
Dao Village, To Mua Commune	1	0	1	0
Lien Hung Village, To Mua Commune	19	0	19	0
Hao Village, Muong Te Commune	45	0	45	0
Hang Village, Muong Te Commune	5	0	5	0
Hua Pu Village, Muong Te Commune	5	0	5	0
Suoi Khau Village, Suoi Bang Commune	4	0	4	0
Bo Village, Suoi Bang Commune	3	0	3	0

**Table 06: The status of the payment of compensation to affected households**

TT	Packages/components/subprojects	Compensation Costs (VNĐ)		Total paid (VNĐ)	
		Approved amount	Actual amount	Paid to date	To be paid
<b>I</b>	<b>So Vin Hydropower Project</b>	<b>3,955,979,300</b>	<b>3,955,979,300</b>	<b>3,955,979,300</b>	<b>-</b>
1	To Mua Commune				
1.1	Bo Mong Village, To Mua Commune	1,318,662,500	1,318,662,500	1,318,662,500	
1.2	Da Mai Village, To Mua Commune	38,007,360	38,007,360	38,007,360	
1.3	Dao Village, To Mua Commune	4,038,600	4,038,600	4,038,600	
1.4	Lien Hung Village, To Mua Commune	79,042,080	79,042,080	79,042,080	
2	Muong Te Commune				
2.1	Hao Village, Muong Te	469,006,200	469,006,200	469,006,200	

TT	Packages/components/subp rojects	Compensation Costs (VNĐ)		Total paid (VNĐ)	
		Approved mount	Actual amount	Paid to date	To be paid
	Commune				
2.2	Hang Village, Muong Te Commune	1,821,308,160	1,821,308,160	1,821,308,160	
2.3	Hua Pu Village, Muong Te Commune	28,826,700	28,826,700	28,826,700	
3	Suoi Bang Commune				
3.1	Suoi Khau Village, Suoi Bang Commune	10,112,400	10,112,400	10,112,400	
3.2	Bo Village, Suoi Bang Commune	13,864,800	13,864,800	13,864,800	
4	Afforestation replacement	173,110,500	173,110,500	173,110,500	

## 5. Process of resettlement and site clearance:

33. As mentioned above, the project only acquires land used for building substations and electric pole foundations; the factory, penstock, surge tank, dam clues. The acquired area for each household is very small compared to their total area. Further, the project did not affect to structures such as houses or buildings, and then no households have to relocate. Thus, there is no severely affected households by this project.

34. During the implementation process of site clearance, many meetings and consultations have been conducted for AHs. There are some complaints and query about compensation cost and Son La PMU and LFDC redressed all; At the time of reporting, there is no outstanding issue. All of the compensation and assistance were paid in cash for AHs and they are satisfied and support the Project;

35. After completion payment to AHs in May 2016, all AHs have handed over to the contractor.

## 6. Restoring the livelihoods and lives of the affected households:

36. Given the compensation scope for the project, there is no severely affected people, acquired land is small and not significant impact to the livelihood of affected households. So livelihood restoration program is not required.

## 7. Evaluating the satisfaction level of affected households on the payment of compensation for land acquisition:

37. Most affected people are satisfied with the policies and values of compensation and assistance provided by the project. Some households had complaint for compensation cost and LFDC explained, negotiated and achieved the consensus with those households.

## 8. Conformity in the clearance progress with the construction progress and next plans

38. Under the provisions of the ADB and the Resettlement Policy Framework, the compensation implementation must be completed before the construction. However, the compensation implemetation of the project was conducted in the remote areas and fragment population, therefore it took a lot of time. On the other hand, the payment of compensation was implemented in the rainy season, it was very difficult to carry out because the road from the households to the CPCs was eroded. So ADB allowed Son La PC to compensate along with the construction. All compesation were done in May, 2016.

39. Some of transmission lines passed through the rice field areas, the constructor had paid to affected areas.

40. In general, with difficulties mention above, the implementation of site clearance and resettlement had been completed and achieved good results.

### **III. Assessment of livelihood restoration and lesson learnt**

41. The affected households living in the project area mostly belong to the ethnic minority groups; and their educational attainment was limited .The survey result shows that most of people are unskilled labors. Their income is mainly from agriculture and free labor and their affected land is no significant, they still have remaining land area for agriculture, forest, aquaculture and fishing.

42. Some AHs used compensation and assistance amount for new business, to build and repair their houses. Some AH used for livestock or bought trucks to transport goods. By consultation with AHs, almost of them said that their living condition had no change and none of the AHs said that their lives were more difficult compare to pre-project.

### **IV. Conclusion and recommendation**

#### **1. Conclusion**

43. Son La power company and LFDC carried out the resettlement process correctly as stated in the RP of project. The steps such as disseminate information, DMS, payment of compensation and assistances are participated and monitored by representatives of the affected people and local government representatives.

44. Although land acquisition progress was behind the plan, Son La power company had many positive activities such as working with local authorities to mobilize and motivate the affected households. The DMS, payment to AHs have been conducted in parallel with construction then the site clearance has been completed and achieved good results .

45. The internal monitoring are fully implemented. Basically, the goal of implementing compensation, supporting affected households was completed. The households are satisfied with the level of support compensation.

#### **2. Recommendation**

46. As power project with network is scatted in moutainous area with small scale. In addition, the implemenation of land acquisition depends much on the coroporation of local authorities. Thus, it is difficulty to complete all compensation and assistance to AHs before construction work. PPMU and LFDC should conduct consultation with Ahs for the process of conducting payment in parallel with consutruction. For that case, progress of site clearance may reach to shedule and DMS can be more accurate.

Figure 1: General location map of So Vin hydropower project

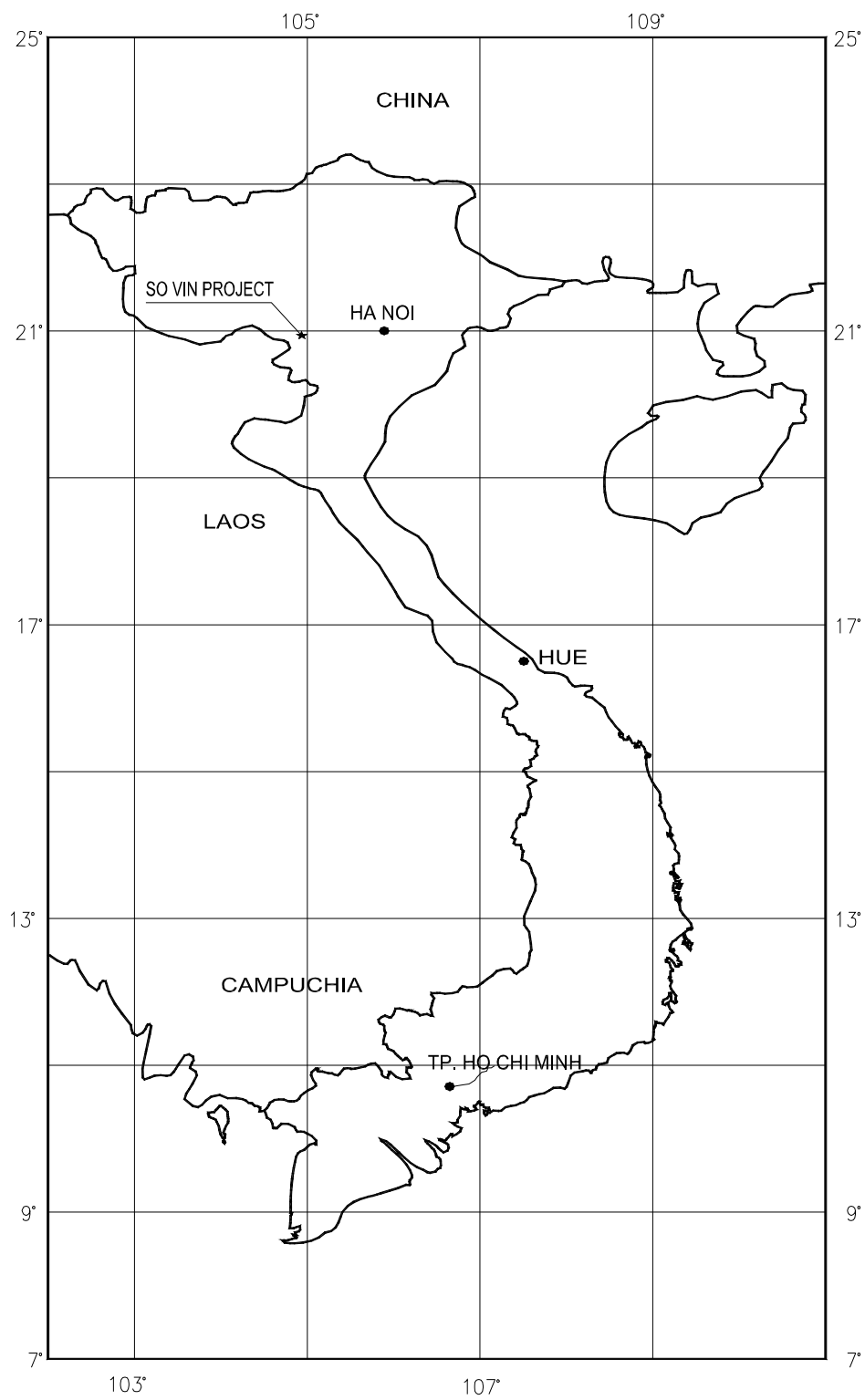


Figure 2: Project Location and Proposed facilities

