



Development of Jakarta-Bandung Fast Rail Infrastructure

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Abstract

The government should pay more attention to the infrastructure in its country so that it is not left behind by other countries. To make this happen, development in the infrastructure sector is needed. One of the developments carried out by the Indonesian government, Joko Widodo, is the development of infrastructure in the mass transportation sector, namely the Fast Train. This project is President Joko Widodo's priority because it is more economical, safe, comfortable and more efficient in travel time. Even though there was a delay in completion plus several risks that had to be borne by related parties, this project was finally successfully completed in October 2023 and the benefits have been felt by more than 718 thousand passengers since its inauguration until December 8 2023. This research uses qualitative research methods with descriptive approach. The data collection technique used in this research is through literature review. The aim of this research is to find out how fast train infrastructure is being developed and what the obstacles are in its implementation.

Keywords: *Fast Train, Whoosh, Mass Transportation, Indonesia – China, Development.*

1. INTRODUCTION

Development in various fields is one way to achieve the goals required by a country. One of the important concerns is development in the economic and social fields because it is directly related to people's daily lives. The economy always develops as a result of a lot of development planning.

The achievement of economic targets, such as economic growth, per capita income of the population, the number of unemployed, poverty levels, and the balance of payments are indicators of the success of a country's economic development (RZ Gultom, 2020).

Infrastructure is one of the main components that drives a country's economic growth because it has become a basic need for a country to ensure the welfare of society, ensure economic activities run smoothly, and increase the speed of regional development. In this regard, since being elected as President in 2014, President Jokowi has started faster infrastructure development. Economic infrastructure in the transportation sector is one of the infrastructure developments carried out by President Jokowi (Dina et al., 2021).

Infrastructure development is one of the development components that is very crucial for increasing the speed of a country's development. Apart from that, infrastructure plays a crucial role as a driver of economic growth (RZ Gultom, 2020).



The transportation, highways, ports, airports, dams, and electricity sectors have an emphasis on infrastructure development. Under President Jokowi, the "closeness" between Indonesia and China is getting stronger, as shown by the amount of bilateral cooperation between the two countries. The construction of a high-speed train between Jakarta and Bandung, which is approximately 142.3 km, is proof of collaboration with Indonesia-China (Aridho et al., 2023).

In November 2014, President Jokowi attended the 22nd rendezvous of the Asia-Pacific Economic Cooperation (APEC) Summit in Beijing, China. China's struggle to attract Indonesia's attention at this summit began with their collaboration to form the Jakarta-Bandung high-speed train. One of the primary discussions is Strengthening comprehensive development in the fields of infrastructure and connectivity. President Jokowi also tested China's high-speed train infrastructure exclusively during the rendezvous. The route from Beijing to Tianjin is 120 kilometers and takes 33 minutes. The fast train made in China then caught Jokowi's attention. To meet with Xi Jinping, Jokowi visited China in March 2015. This visit was a continuation of the investment pledge made at the time of the APEC Summit, which made plans for a Chinese investment of US\$ 63.4 billion in Indonesia. After that, Xi Jinping attended the KAA in Indonesia. Many ministers signed several collaborations between Indonesia and China increasing the correlation between these two countries. The Jakarta-Bandung high-speed train construction project is one of the cooperation conventions. (Aridho et al., 2023). Indonesia is a developing country that has established diplomatic relations with many countries, including China. Their diplomatic relations have been going on since April 13, 1950, and during that time, Indonesia has also established bilateral cooperation in various fields. (Wijaya, 2020).

At the end of September 2015, the Indonesian government announced that China had won the tender to build Indonesia's first high-speed rail line connecting Jakarta to Bandung. The aim of building the Jakarta-Bandung fast train is to shorten the travel time between Jakarta and Bandung because these two cities are the most dynamic and have a large number of people traveling every year (Wijaya, 2020).

Transportation is one industry that plays a very important role in supporting various daily activities. In addition to influencing all aspects of life, transportation is an important and strategic means of growth to accelerate the economy and strengthen solidarity. due to population growth and increasingly extensive settlements, especially in large cities such as Jakarta and Bandung, the need for transportation will increase (Kadarisman, 2018)

Thus, researchers want to conduct a time analysis, the need for transportation is increasing, especially in big cities such as Jakarta and Bandung. To meet these needs, transportation modes compete with each other through land, maritime, and air transportation. One of these competing modes of transportation is the public train. This is because trains are said to be more economical, cheap, safe, comfortable and environmentally friendly. In this regard, the government determined that rail transportation must be modernized (Dina et al., 2021).

Several countries, including Indonesia, also use barah trains as mass transportation. Namely China, Japan, Great Britain, and Europe. (Salim et al., 2023) by Law number 17 of 2007 regarding Long Term Development Plans (UU RPJPN), the Indonesian government has now decided on the National Long Term Development Plan (RPJPN) 2005–2025. (Astriani & Andharani, 2017).

In 2015, the Indonesian government collaborated with the Japan International Cooperation Agency (JICA) to conduct a feasibility study to build a high-speed train project that would allow investors to invest, and Japan has shown interest in becoming an investor. The funds required to carry out this research are borne by JICA. Furthermore, China expressed interest in becoming an investor in the high-speed train project through the BRI program. As a result, Indonesia summoned the Boston Consulting class to review proposals from the two countries. Indonesia has decided that China will be the primary investor in the construction of the Jakarta-Bandung high-speed train. One reason the



Indonesian government chose China was that Japan wanted a guarantee from the Indonesian government, while China was willing to become an investor in a business-to-business scheme, which was in line with the Indonesian government's wish not to use the APBN to build high-speed trains. Chinese investment helps the BRI program in Indonesia by creating the desired infrastructure. One of the models of China-Indonesia cooperation in the BRI program is this high-speed train project. (Octorifadli et al., 2021).

In terms of economic transformation, no country has yet been able to imitate or even compete with China. The Belt and Road Initiative (BRI) program, one of President Xi Jinping's foreign policies, aims to increase collaboration between countries throughout the world. President Xi Jinping also uses this strategy to support China's economic revival. BRI combines cultural, economic, political national, and international security aspects. (Octorifadli et al., 2021).

The BRI project began in 2013 with an emphasis on the largest links between Asia, Europe, and Africa. During President Jokowi's administration, Indonesia was one of the countries involved in the BRI project. To form infrastructure, Indonesia needs large funds. One of infrastructure built during President Jokowi's administration is the Jakarta-Bandung high-speed train. Even neighboring Indonesia does not yet have a fast train. (Octorifadli et al., 2021).

The Jakarta – Bandung high-speed railway is a project owned by PT Kereta Cepat Indonesia China (KCIC). PT KCIC was founded in October 2015 and is a joint company between a consortium of BUMN (State-Owned Enterprises) through PT PSBI (Pilar Sinergi BUMN Indonesia) and a consortium of Chinese railway companies through Beijing Yawan HSR Co.Ltd. KCIC exists to develop railway transportation infrastructure in the country. The Jakarta Bandung Fast Train Project (KCJB) is one of the PSN (National Strategic Projects) of the Indonesian Government which is in sync with Presidential Regulation No. 3 of 2016 regarding the acceleration of implementation of National Strategic Projects. KCIC's vision is to enhance biological quality by providing connectivity and creating a more pleasant residential environment with the mission of providing modern transportation that is safer, faster, shortens the time, and more comfort, able and creates the most beautiful, h, and enjoyable lifestyle. friendly use of the environment along the corridor to be developed. (Kalicya, 2020)

The Jakarta-Bandung fast train project has an investment value of US\$ 5.135 billion (Rp. 68.13 trillion). PT Pilar Sinergi BUMN Indonesia is a consortium of State-Owned Enterprises (BUMN) led by PT Wijaya Karya, which owns companies such as PT Kereta Api Indonesia, PT Perkebunan Nusantara VIII, and PT Jasa Marga, as well as Chinese companies led by Beijing Yawan HSR Co Ltd., which consists of China Railway International Co Ltd, China Railway Group Limited, Sinohydro Corporation Limited, Quick Train Indonesia, and China Railway Group Limited. (Handayani, 2023).

This train has a speed of 350 km/hour and takes 45 minutes to travel the distance from Jakarta to Bandung. (Wulansari, 2023). The express train from Jakarta to Bandung operates for 18 hours every day and can accommodate 583 passengers at a time. at peak hours, several trains can be combined to accommodate more than 1000 passengers. (Betari & Tresna Wiwitan, 2023).

However, even at the planning stage, the project faced many problems before it was finally started. In 2016, the Indonesian government stated that the high-speed train project would be postponed because the concession permits and construction permits had not been completed. In the same year, the construction of this project was also hampered by permits from environmental impact analysis (AMDAL), which determines development permits, which also hampered development. In 2019, the project was also hampered by permits from the Regional Government. Apart from that, it is said to be too close to use the fast train between Jakarta and Bandung. (Liputan6.com 2019)



Apart from that, problems with land acquisition for the project meant that funding could not be carried out due to obstacles that occurred. (detik.com 2022). Project management becomes worse, especially in terms of financing, starting from the planning, estimation, and budgeting stages. As a result, projects are delayed and costs increase. (Salim et al., 2023)

According to Dwiwana Slamet Riyadi, Main Director of KCIC, there are 3 main obstacles facing the Jakarta-Bandung High-Speed Train project. among them are: 1. After Presidential Regulation (Perpres) number 93 of 2021 concerning the acceleration of the Implementation of Infrastructure and Facilities for the Jakarta-Bandung High-Speed Train, funding constraints have resulted in the government deciding to resulting in PT. KAI is the primary sponsor. This is because the PMN funds have not arrived, which means the project has to use the State Revenue and Expenditure Budget (APBN) to cover existing increases. two. due to Covid-19, from 1 June 2021 to 1 February 2022, 491 construction workers were confirmed to have contracted the Covid-19 virus. (Bettari & Tresna Wiwitan, 2023).

Even though this is one of the biggest projects in Indonesia, there is still a responsibility to comply with regulations and laws. These laws can be administrative requirements or laws that take into account the impact of the project on the environment.

2. METHOD

In this research, the author uses qualitative research methods through a descriptive approach. The data collection technique used was through a literature review. A literature study is a data collection method that collects data from various sources including books, articles, and news related to research on the construction of the Jakarta-Bandung high-speed train (Dina et al., 2021). The data used is secondary data, which means that the data comes from existing references, such as literature, encyclopedias, journals, and scientific papers, as well as data sources related to this research (RZ Gultom, 2020).

3. RESULT AND DISCUSSION

The Indonesian government under the command of President Jokowi is committed to establishing infrastructure. Infrastructure construction must consider sustainable development and implement methods to prevent pollution or environmental damage at the construction site. When creating infrastructure, 3 things must be considered: natural resource conditions, environmental quality, and population factors. This is supported by Law No. 32 of 2009 regarding environmental protection and management, National Medium Term Development Planning 2009-2015 (RPJMN), as well as Long Term Development Planning 2005-2025 (RPJP). (Wulansari, 2023).

Modernizing mass transportation is one of the efforts to improve Indonesia's infrastructure. The transportation sector plays an important role in supporting various kinds of people's activities. Trains are said to be more economical, mass-based, cheaper, safer, more comfortable, and environmentally friendly, making them one of the Indonesian government's primary priorities for mass transportation. As a result, the Jakarta-Bandung high-speed train project has begun. This project has been designated as one of the national strategic projects (PP 93 of 2021) (Putri and Mahani 2023).



The Jakarta-Bandung fast train project has an investment value of US\$ 5.135 billion (Rp. 68.13 trillion). PT Pilar Sinergi BUMN Indonesia is a consortium of State-Owned Enterprises (BUMN) led by PT Wijaya Karya, which owns companies such as PT Kereta Api Indonesia, PT Perkebunan Nusantara VIII, and PT Jasa Marga, and a Chinese company led by Beijing Yawan HSR Co Ltd., which consists of China Railway International Co Ltd, China Railway class Limited, Sinohydro Corporation Limited, Quick Train Indonesia, and China Railway class Limited. (Handayani, 2023). This train has a speed of 350 km/hour and takes 45 minutes to cover the distance from Jakarta to Bandung. (Wulansari, 2023).

As reported by Tiket.com, the ticket price for this high-speed train is compounded, namely Rp. 150,000,- for short distances and Rp. 250,000,- to Rp. 350,000,- for a long break. These price variations are divided into 3 classes, namely; 1. VIP class consists of 18 seats in 1 carriage and has a 1-2 seating arrangement, and this VIP category is estimated at Rp. 350,000,- / passenger. 2. Class 1 (First class), consisting of 28 seats and two-by-two seating arrangements, and this category is estimated to start from Rp. 300,000,- / passenger. 3. Class 2 (Second class), consists of 555 seats and has a 3-2 set arrangement, and this category is estimated to start from IDR. 250,000,- / passenger.

The fast train from Jakarta to Bandung operates for 18 hours every day and can accommodate 583 passengers at once. during peak hours, several trains can be combined to accommodate more than 1000 passengers. (Betari & Tresna Wiwitan, 2023). Looking at the origins of this, it can be predicted that many people will be able to travel from Jakarta to Bandung (or vice versa) and the impact on the economy, both for the economy of the local population and the economy in the country, will experience a tremendous increase.

This significantly shortens the travel time from Jakarta to Bandung, which is generally around three to four hours by inter-city train and five to seven hours by local train. Some of the cities that are moving the most forward is Bandung and Jakarta, both of which have populations that continue to increase every year. (Wijaya, 2020).

As reported by Finance.dtk.com, there have been 718 thousand passengers (14,399 First class passengers, 25,709 Business group passengers, and 678,399 Premium Economy class passengers) who have tried out the Whoosh fast train since it started operating until 8 December 2023. This shows that many residents are enthusiastic about the arrival of this sophisticated infrastructure. Eva Chairunisa, General Manager Corporate Secretary of KCIC, said that the facilities that residents expect at each station have been well made so that the things that passengers are most looking for, namely peace, security, and travel efficiency can be fulfilled. This is the reason why many passengers have tried this fast train.

Because these two are the first and third largest cities in Indonesia, this is the reason why the cities of Jakarta and Bandung were chosen as fast train routes. Apart from that, Jakarta is an industrial city and Bandung is the capital city of West Java and is one of the cities that is a destination for tourists to vacation and travel with family and other friends. The choice of the Jakarta-Bandung route also creates economic equality and economic spread. The economic development and growth of traders or other business actors who set up shops or sell around train stops have an economic impact. This is in line with the government's aim to improve the economy and tourism in several districts via this fast train route, including East Jakarta (in DKI Jakarta Province), Bekasi City, Bekasi Regency, Karawang Regency, Purwakarta City/Regency, West Bandung Regency, Kota Bandung, and Bandung City. (Kadarisman, 2018).

Currently, Indonesia is collaborating with China on the construction of the Jakarta-Bandung high-speed train because the country has extensive experience in building and sharing high-speed train systems. As a result, Indonesia can use China's experience as a standard and optimize knowledge transfer during the project development process, in both aspects policy and construction. On the



other hand, other countries that have fast train routes, such as Japan, Taiwan, and England, can be references for Indonesia to receive various perspectives on policy implementation in each country (Salim et al., 2023).

As a result of a survey conducted between 10 and 15 July 2019 using 1,540 respondents in all provinces of Indonesia at that time, it was revealed that China had a greater influence on Indonesia than the United States. (Djayadi Hanan, 2020).

This has been proven by President Jokowi's first visit to China after being inaugurated to discuss economic collaboration, especially in the fields of trade, finance, infrastructure, and industry. So, during President Jokowi's administration, diplomatic relations between Indonesia and China were very good. taking into account the report that Indonesia was one of the first developing countries to establish diplomatic relations with China on April 13, 1950. Infrastructure development through the construction of mass transportation, such as high-speed trains, is one of China's offers to Indonesia to cooperate. (Wijaya, 2020).

The Jakarta Bandung Fast Train line is being built by PT Kereta Cepat Indonesia China. The line is 142.3 kilometers long and starts at Halim Perdanakusuma station in Jakarta and ends at Tegalluar station in Bandung Regency. The Jakarta-Bandung high-speed train line was built in three types, according to relevant sources. This line was built on ground level (At Grade) for 71,630 km, on bridges (Elevated) for 53,540 km, and over tunnels (Tunnel) for 15,630 km. (Kadarisman, 2018).

Thus, the Jakarta-Bandung fast train project has an investment value of US\$ 5.135 billion (Rp. 68.13 trillion). Track length: 142.3 kilometers. Stations include Halim in East Jakarta, Walini in West Bandung, Karawang in West Java, and Tegalluar in West Java. Halim and Karawang stations are approximately 41.2 km apart, while Karawang and Walini stations are 55.5 km away, and Walini and Tegalluar stations are 44.4 km away. However, in the middle of the construction of the Jakarta - Bandung High-Speed Train Project route, there was a change from the construction of Walini Station to the construction of Padalarang Station. However, the development target is to be completed by mid-2023 (Putri & Mahani, 2023).

The Jakarta - Bandung high-speed railway is a project owned by PT Kereta Cepat Indonesia China (KCIC). PT KCIC was founded in October 2015 and is a joint company between a consortium of BUMN (State-Owned Enterprises) through PT PSBI (Pilar Sinergi BUMN Indonesia) and a consortium of Chinese railway companies through Beijing Yawan HSR Co.Ltd. KCIC is here to develop railway transportation infrastructure in the country. The Jakarta Bandung Fast Train Project (KCJB) is one of the PSN (National Strategic Projects) of the Indonesian Government which is in sync with Presidential Regulation No. 3 of 2016 regarding the acceleration of implementation of National Strategic Projects. KCIC's vision means improving a better quality of life by providing connectivity and creating a more pleasant residential environment with the mission of providing the latest transportation that is safer, faster, more timely, and more comfortable and creates the most active, happy, and comfortable lifestyle. friendly to the environment along the corridor to be developed. (Kalicya, 2020)

The land acquired is 650 ha and will operate from May 31, 2019. Executor: PT Kereta Cepat Indonesia-China, which means a consortium between Indonesian and Chinese state-owned companies.

The maximum speed is 300 km/h. As a railway business entity, PT Kereta Cepat Indonesia China (KCIC) is owned by PT Pilar Sinergi BUMN Indonesia (PSBI) with 60% of the shares, and China Railway International (CRI) with the remaining 40%. PSBI consists of four state-owned companies: PT Kereta Barah Indonesia, PT Wijaya Karya Tbk, PT Jasa Marga Tbk, and PT Perkebunan Nusantara (PTPN) VIII. (Kadarisman, 2018).



The biological environment is the area where living things live, search, and function. humans depend on their environment. Human nature, character, and actions are greatly influenced by their environment. However, humans can change, improve, and even create their environment. Since October 2015, applicable regulations have determined the requirements for the construction of high-speed trains. All laws must be obeyed in long-term strategic projects, and nothing must be violated. However, the AMDAL permit was obtained on January 20, 2016. Therefore, the project has already received environmental permits (AMDAL), permit permits, and permission to establish a railway business entity. (Handayani, 2023).

President Joko Widodo laid the foundation stone on January 21, 2016, the day the environmental permit was approved. The high-speed train project was deemed feasible by the Minister of Environment, Life and Forestry, Siti Nurbaya. The Government and Regional Governments are required to make Strategic Environmental Assessment (KLHS) planning based on Article 15 paragraph (1) of Law number 32 of 2009 concerning the protection and management of the biological environment. This is intended to ensure that the principles of sustainable development are fundamental and integrated into the development of a region and to ensure that SEA is designed before the policy, plan, or program is created. To ensure that the principles of sustainable development are included in appropriate regional development, KLHS itself is a series of comprehensive, involved, and systematic analyses. The position of KLHS is different from AMDAL, which requires environmental permits. KLHS is only used to ensure that programs, plans, and policies are in sync using development principles. (Fitria, 2023).

However, in reality, there is no plan related to appropriate development without shortcomings or criticism from the people. Likewise, the construction of the Jakarta-Bandung high-speed train has also been controversial. One of the criticisms contained in the process of building the Jakarta-Bandung high-speed train is criticism from environmental facilities (WALHI). The Indonesian Bioenvironmental Service (WALHI) assesses that the procurement of the Jakarta-Bandung high-speed train does not pay enough attention to environmental management and protection, and lacks a comprehensive Environmental Impact Analysis (AMDAL). This is assessed based on the benchmark that the water catchment area has decreased as a result of the construction of high-speed train infrastructure and residential development around the high-speed train station. Of course, this reduces water absorption locations, which in turn reduces water availability at several water absorption locations. Apart from that, the construction of this fast train utilizes 56.6 ha of production forest land and 150 ha of agricultural land around the station and track. As a result, the quality of the environment around stations and train tracks can decline. and national food storage could be reduced due to the transfer of agricultural land. (Kadarisman, 2018).

Apart from that, there is speculation that blasting techniques were used when building a high-speed train tunnel on Mount Lie in Cimahi City and West Bandung Regency. One of the residents of the Tipar Silih Asih Complex has reported this matter to the National Human Rights Commission National Commission on Human Rights. Dozens of houses in the Tipar Silih Asih Complex suffered cracks and damage as a result of the blast. This makes residents worried about the possibility of landslides in the area. (Handayani, 2023).

Risk analysis generally takes the form of identification and assumptions and a risk evaluation process through appropriate measurement and control. At the risk analysis stage of the Jakarta-Bandung high-speed train construction, there are seven risk categories: natural, economic, environmental, project correlation, technical, human, and planning. in the natural category, risks are caused by natural conditions at the project location, as well as its geographical and geological location. in the economic category, risks are caused by the economic conditions of the country and the project itself. Economic conditions are always changing and can rise or fall at any time. Here, the category of person



in question means the risks that exist as a result of the quantitative and qualitative requirements of project workers. Due to the large volume of work and the long project location with limited time, the construction of the Jakarta-Bandung high-speed train will require thousands of employees. The types of environmental risks in question include risks caused by society, government regulations, and living conditions around the project. This area is very interactive and diverse. This project also correlates with the government, society, and Indonesian regulations when implemented. The type of risk that arises in processes related to project planning is known as planning. Indonesia and China are collaborating to plan and build the Jakarta-Bandung Fast Train project. Project designs were also sent from China. In cases where construction is carried out collaboratively by one Indonesian contractor and two Chinese contractors, the risk in the project relationship category is the risk related to the relationship between the parties involved in project implementation. Technical category risks mean risks related to technical project work processes. This is caused by the fact that several structural construction processes that have different work risks, such as backfilling, filling, tunnels, and bridges, are carried out during this project. (Kusumadewi et al, 2017).

All parties involved in the Jakarta-Bandung high-speed train project should be responsible for the environmental damage it causes, both to the affected communities and the environment that is damaged..

4. CONCLUSION

Infrastructure development is one of the development components that is very crucial for accelerating development in a country. Infrastructure plays a crucial role in driving economic growth, one of which is infrastructure in the transportation sector. To build infrastructure, infrastructure construction must consider sustainable development and implement methods to prevent pollution or environmental damage at the construction site. such as the Jakarta - Bandung high-speed rail transportation infrastructure, which is being evaluated as a form of mass transportation modernization to improve infrastructure in Indonesia. The transportation sector also plays an important role in supporting various kinds of community activities. Trains are claimed to be more economical, mass-based, cheaper, safer, more comfortable, and environmentally friendly, as a result, they have become one of the main priorities of the Indonesian government to become mass transportation. As a result, the Jakarta-Bandung high-speed train project has started use and this project has been designated as one of the National Strategic Projects.

The Jakarta – Bandung high-speed railway is a project owned by PT Kereta Cepat Indonesia China (KCIC). PT KCIC was founded in October 2015 and is a joint company between a consortium of BUMN (State-Owned Struggle Agency) through PT PSBI (Pilar Sinergi BUMN Indonesia) and a consortium of Chinese railway companies through Beijing Yawan HSR Co.Ltd. Indonesia is collaborating with China in building the Jakarta-Bandung high-speed train because the country has extensive experience in building and developing high-speed train systems. As a result, Indonesia can use China's experience as a standard and optimize knowledge transfer during the project development process, both in terms of policy and construction. The reason why the cities of Jakarta and Bandung were chosen as the fast train routes is because they are the first and third largest cities in Indonesia. The Jakarta Bandung Fast Train line is being built by PT Kereta Cepat Indonesia China. The length of the line is 142.3 kilometers and starts at Halim Perdana Kusuma station in Jakarta and ends at Tegalluar station in Bandung Regency. However, in the middle of construction, the project route for the Jakarta - Bandung Fast Train Project underwent a change from the construction of Walini Station to the construction of Padalarang Station. However, the construction target is to be completed by mid-2023.



Since October 2015, applicable regulations have set requirements for the construction of high-speed trains. All laws must be obeyed in long-term strategic projects, and nothing must be violated. However, the AMDAL permit was obtained on January 20, 2016. Therefore, the project has already obtained an environmental permit (AMDAL), licensing permit, and permit to establish a railway business entity. The High-Speed Train project was called feasible by the Minister of Environment, Life and Forestry, Siti Nurbaya. The government and regional governments are required to produce a Strategic Environmental Assessment (KLHS) plan. KLHS is only used to ensure that programs, plans, and policies are in sync with development principles.

However, in reality, no development plan is perfect without any shortcomings or criticism from the community. Likewise, the construction of the Jakarta-Bandung high-speed train has also been controversial. One of the criticisms of the process of building the Jakarta-Bandung high-speed train is criticism from environmental facilities (WALHI). The Indonesian Biological Environment Agency (WALHI) assesses that the procurement of the Jakarta-Bandung high-speed train does not pay enough attention to governance and protection of the biological environment, as well as a lack of comprehensive environmental impact analysis (AMDAL).

This is evaluated based on the benchmark that the water catchment area has decreased as a result of the development of high-speed train infrastructure and residential development around the high-speed train station. Of course, this reduces water absorption locations, which in turn reduces water availability at several water absorption locations. Apart from that, there is speculation that blasting techniques were used when forming a high-speed train tunnel on Mount Lie in Cimahi City and West Bandung Regency. One of the residents of the Tipar Silih Asih Complex has reported this problem to the National Human Rights Commission, KOMNAS HAM. Dozens of residences in the Tipar Silih Asih Complex experienced cracking and damage as a result of the explosion. Risk Analysis generally takes the form of identification and assumptions as well as a risk assessment process through appropriate measurements and controls. At the risk analysis stage of the Jakarta-Bandung high-speed train construction, there are seven risk categories: natural, economic, environmental, project correlation, technical, human, and planning.

So all parties involved in the Jakarta-Bandung high-speed train project need to take responsibility for the environmental damage caused by this high-speed train project, both to the residents affected and to the environment that is damaged.

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