The Role of the Local Government in Monitoring and Maintenance Bridges, Learning from the Case of the Collapsed Bridge in Nusa Lembongan Bali

Nyoman Diah Utari Dewi¹, V. Rudy Handoko²

¹Master of Public Administration Science, Ngurah Rai University Bali
²Doctor of Public Administration Science), ²Universitas 17 Agustus 1945 Untag Surabaya
(email: diah.sindoe@gmail.com)

Abstract
There are many issues of infrastructure especially in the remote area in the islands of Indonesia and goes viral about collapsed bridges and how students and teachers transported to their school by crossing the collapsed bridges where is the only way to go to their school in the cross of their village. Although the government authority and Standard Operation Procedure are in ruled and structured but still collapsed bridges happened in Indonesia. The main objective of this study is to analyze why the monitoring are failed, learning from the case of the collapsed bridge happened in Nusa Lembongan island in Bali. This study employed the qualitative descriptive methodology. The data collection techniques used were literature study, observation, and interviews with the government authority in PUPR Department and Klungkung Municipality and stakeholders in Nusa Lembongan Island. The study results shows that due to unclear division between central and local government role and budget, the division of monitoring and maintenance of bridge infrastructure has become unclear resulting in an accident. The unclear owner of the assets of the bridge caused the maintenance of the bridge to be displaced. The cased of collapsed bridge in Nusa Lembongan happened because of the unclear distribution of authority in the monitoring and maintenance between the Bali Provincial and Klungkung Municipality Government.

Keywords:
authority; infrastructure; monitoring; maintenance; bridge

Introduction
In economic development, infrastructure development is one of the important aspects. It is undeniable that the country's economic growth rate cannot be separated from the influence of existing infrastructure in the country. This economic growth will ultimately also affect the welfare of the people. Simply put, a good development and infrastructure in a country will be able to encourage economic improvement in the country. The availability of infrastructure will be able to facilitate economic flows and other benefits including; support the smooth economic activities of the community, encourage the distribution of the flow of
production of goods and services, support economic, socio-cultural, unity and unity activities as well as bind and connect between regions. From the benefits of the infrastructure in addition to its role in the economic sector, public works infrastructure has a vital role in supporting other sectors that are also important in the welfare of the community.

Table 1.1.
Indonesia's ranking in the Global Competitiveness Index is seen from the infrastructure pillars of 2011 – 2018

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SCORE</th>
<th>RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 - 2012</td>
<td>3.77</td>
<td>76</td>
</tr>
<tr>
<td>2012 - 2013</td>
<td>3.75</td>
<td>78</td>
</tr>
<tr>
<td>2013 - 2014</td>
<td>4.17</td>
<td>61</td>
</tr>
<tr>
<td>2014 - 2015</td>
<td>4.37</td>
<td>56</td>
</tr>
<tr>
<td>2015 - 2016</td>
<td>4.19</td>
<td>62</td>
</tr>
<tr>
<td>2016 - 2017</td>
<td>4.24</td>
<td>60</td>
</tr>
<tr>
<td>2017 - 2018</td>
<td>4.50</td>
<td>52</td>
</tr>
</tbody>
</table>


According to the Global Index Report on the World Economic Forum website, the Global Competitiveness Index has been used as an important tool by policy makers in many countries for many years. The second pillar states that extensive and efficient infrastructure is essential to ensure the effective functioning of the economy. Infrastructure development focuses on 35 Strategic Development Areas (WPS) which have been established as the basis for integrated PUPR infrastructure planning and programming. Public Policy determines a large role in infrastructure procurement. The role of public policy is due to the absence of a clear pricing mechanism for infrastructure procurement. The increase in infrastructure procurement to income cannot be interpreted as the income elasticity of demand because the infrastructure costs can differ in each country. Data from The World Bank itself shows that the cost of building roads in middle-income countries is only around 2/3 of rich and poor countries. This condition shows that the real relationship of GDP per capita with infrastructure is not simple (weforum website).

The existence of a suspension bridge or suspension bridge in Indonesia is very helpful for the community because the geographical area in Indonesia has many rivers, valleys and mountains. These conditions physically make the location of residence of residents with various public service facilities such as government offices, schools, and markets far separated. Along with the infrastructure acceleration program that focuses on the 35 WPS
(Strategic Development Areas) contained in Nawa Cita from the government program, the essence of the third Nawa Cita Program is Building Indonesia from the periphery by strengthening regions and villages within the framework of a unitary state.

During the last 13 years 2004-2019, dozens of bridge collapsed, broken or collapsed cases colored the news of the mass media. Tens of people died and hundreds suffered injuries. The following are some examples of cases of small bridges which collapsed in Indonesia:

**Figure 1.1.**
**Kampar Regency, Riau. For the sake of schooling, elementary school students in Riau dared to cross the broken bridge.**


In Figure 1.1, dozens of SD 008 students in Salo Timur Village, Salo Subdistrict, Kampar Regency, Riau, for two years challenged their death to walk on a weathered bridge to study. There was also explained that there are other alternative roads to the school but the distance can reach 3 kilometers from the homes of residents. The closest access to the school must be through the worn bridge. The condition of the damaged bridge has been reviewed directly by the Kampar Regional Government, but all of it is only a review without a solution to repair it.

Development must pay more attention to improving the quality of life we live and the freedom we enjoy ”(Todaro and Stephen C. Smith 2006). UNDP (2010) in its annual report
stressed that the welfare and quality of life of the population is the most important measure to declare that development is said to be successful.

The picture below is an example of a suspension bridge rebuilt by the collaboration of the private sector and the community and the importance of the benefits of the bridge after it has been repaired and reused by the community:

**Figure 1.2.**
**Desa Rulung Mulya Natar Lampung Selatan**

![Image of Suspension Bridge](https://lampungpro.com/post)


Departing from a small number of bridge collapse cases in Indonesia as described in the pictures above, there are notes and questions that still hang. Why do these things happen repeatedly in different areas? For this reason, researchers conducted a study using the case of the collapse of the Yellow Bridge connecting Nusa Lembongan Island and Nusa Ceningan in Klungkung Regency, Bali Province. Then what exactly is the policy and who is in charge of the supervision and maintenance of the bridges so that they are left in a badly damaged condition to collapse.

**Methods**

According to Burhan Bungin in his second edition of Qualitative Research, this study is in-depth and piercing the research objectives (Burhan, 2012: 68-70). On the other hand,
descriptive qualitative case studies are exploratory research and play a very important role in creating hypotheses or people's understanding of various social variables. Case studies are investigative strategies where researchers explore in depth a program, event, activity, process or one or more individuals. Cases are limited by time and activity, and researchers collect detailed information using various data collection procedures over an ongoing period of time (Creswell, 2009).

The research approach used is a case study research with an emphasis on the case implications of the yellow bridge maintenance and supervision policy on the development of tourism in communities on the islands of Nusa Lembongan and Nusa Ceningan in Klungkung Regency, Bali Province in the context of public policy evaluation studies. Objects and Research Informants. This research focuses on the bridge supervision and maintenance policy implemented by the Central Office and National Road Implementation Office by taking a case study on the collapse of the Yellow Bridge. The study was conducted on Nusa Ceningan Island, Lembongan Village, Nusa Penida District, Klungkung Regency, Bali Province.

In this research, all informants will certainly include policy makers in supervision and maintenance, the community and tourism service business stakeholders around Nusa Lembongan and Nusa Ceningan who feel the direct impact of the collapse of the Yellow Bridge. The source and location of this research data were obtained from in-depth interviews or interviews conducted with the following key informants:

1. Director General Bina Marga
2. Head of Preservation and Equipment Division II, BBPJN VIII Surabaya (Balai Jalan dan Jembatan Wilayah VI Surabaya)
3. Head of Working Unit for National Road Region II Implementation in Bali Province
4. Klungkung Regent
5. Head of Public Works Division of Klungkung Regency
6. Head of Lembongan Village
7. Manager Le Pirates Beach Club and villa, Nusa Ceningan
8. Manager Secret Point Huts and Jumping Cliff Nusa Ceningan
9. Business Travel Entrepreneurs
10. Foreign tourists

Data collection methods used in this study are by conducting interviews or in-depth interviews with all informants, conducting field observations and documentation studies, namely collecting data from media documents, visuals and searching online data. The data analysis technique used for the purpose of discussing the results of this study is a qualitative descriptive analysis technique with a case study model of the collapse of the Yellow Bridge in Nusa Ceningan. One of the primary data that will be used is interviews with expert informants on this case.

The method used to analyze in this study is a qualitative descriptive method using an interactive model that is a kind of cycle related to data collection activities, simplification of data exposure data, and drawing conclusions. So the data analysis is done together with data collection. The technique of collecting data is done by the writer through primary data and secondary data. Primary data obtained through in-depth interviews with several informants who are experts in infrastructure policy in Indonesia and Bali and informants who touch directly on the object of the collapse of the Yellow Bridge, while secondary data obtained through the documentation of the news and photographs surrounding this case.

Results and Discussions

Administratively, seen from the data released by the Bali Provincial Tourism Office that Bali Province is divided into eight districts and one city, namely Jembrana, Tabanan, Badung, Gianyar, Karangasem, Klungkung, Bangli, Buleleng, and Denpasar Cities which are also the provincial capitals. Klungkung Regency is the smallest regency in the province of Bali and its capital is in the city of Semarapura.

Based on Bali Disparda Bali Island is the most popular tourist destination in Indonesia. The total number of foreign tourists visiting Indonesia through the entrance of Ngurah Rai Airport reached 40% as of October 2016, with the value of Bali’s foreign exchange receipts for Indonesia from the tourism sector amounting to 70 Trillion Rupiah. An increase in foreign tourist arrivals, especially to Bali, from 4,001,835 (January – December 2015) to 4,071,905 (January – October 2016).

Weak supervision and maintenance of the yellow bridge connecting Nusa Lembongan and Nusa Kuningan caused the bridge to collapse twice. The yellow bridge collapsed for the
first time in 2010 and there is no record of casualties, but the most recent phenomenon is the collapse of the bridge for the second time on October 16, 2016.

As written in the online daily liputan6 (2016) it was mentioned that the number of victims due to the collapse of the yellow bridge according to the National Disaster Management Agency (BNPB) who died as many as 9 people 34 people were injured. At the time of the incident coincided with the Hindu Nyepi Segara ceremony, at that time it was estimated that around 70 people were pedestrians and motorbikes on the bridge at the same time. The Head of the BNPB Data and Public Relations Information Center Sutopo Purwo Nugroho also mentioned that before the bridge collapsed an inspection was carried out on October 13, 2016 and the results of the inspection of the bridge were declared critical to be passed so a prohibition sign was installed.

Dye and Anderson's thinking is in line with public policy expert Seligman, who in 1995 wrote an article entitled The Public Policy Orientation and Social Science Courses. Seligman (1955) emphasizes that public policy is related to functions and processes related to politics. Political, social and economic problems are categorized in the scope of public policy issues. However, over the times in 1980, Dye and Gray emphasized that socioeconomic factors occupy the main determinants of public policy compared to political factors (Dye & Gray, 1980).

William Dunn in his book Introduction to Public Policy Analysis (1998) states that in formulating policy problems is the importance of understanding policy problems because policy analysts seem to fail more often because they solve wrong problems. Dunn also mentioned that Policy Monitoring or Policy Monitoring is a policy analysis procedure used to form information about cases and consensus of public policy.

Departing from the Yellow Bridge phenomenon, the researchers conducted a study of the Bridge Supervision and Maintenance Policy in Indonesia. A policy product will be ready to be realized in a more real form in a measurable formula.

According to Edwards (1980: 77-78) lack of buildings, equipment, supplies, can hinder policy implementation. Budget constraints, complicated auction systems, and public opposition also lead to limited fulfillment of facilities. Edwards III (1980: 90-114) explains that there are several factors that influence the implementation of policies from the disposition of executors, namely the effects of dispositions, staff problems in the
bureaucracy and incentives. Edward stated that in general, the more coordination needed to implement a policy, the less chance for success. According to Edwards III (1980: 9-11), policy implementation is influenced by four variables, namely (1) communication, (2) resources, (3) disposition, and (4) bureaucratic structure.

In the case of the yellow bridge, the reason for the scientific problem obtained was that it was unclear whether the status of the assets belonged to the province or district. Then as a result there is unclear responsibility for the supervision and maintenance of the bridge. Because there is no clear responsibility, the bridge is abandoned without supervision and maintenance, so it has a direct impact on the continuity of tourism on the island, as well as affecting the economy of the local population in general.

In this study the researchers analyzed the monitoring and maintenance policy of the yellow bridge through 4 functions in the policy analysis taken from William N. Dunn (1998) obtained from monitoring, namely Compliance, Auditing, Accounting and Exploration.

This does not merely arise from the collapse of the Yellow Bridge which is classified as a small bridge in the area or island, but the impact will be very large for all regions in Indonesia, especially remote areas or islands that experience similar cases. The researcher analyzes how the logic of policy in Indonesia through supervision and maintenance also concerns the organization and work procedures of the technical implementing unit in the Ministry of PUPR in general and the National Road Center in particular.

As an international tourism destination island, Bali is not only famous for its natural beauty, but also its unique arts and culture. Based on data from foreign tourist arrivals directly to Bali through the Airport or Port collected by the BPS of the Province of Bali with Immigration UPT respondents in the Province of Bali, tourist visits continue to increase from year to year. In 2017, foreign tourist arrivals directly to Bali reached 5,697,739 tourists. This number increased by 15.62 percent when compared with tourist arrivals in 2016 which reached 4,927,937 tourists. When compared with the previous 5 years, foreign tourist arrivals directly to Bali increased by 73.78 percent where in 2013 foreign tourist arrivals directly to Bali were only 3,278,598 tourists (Klungkung Regency Statistic 2017).

The development of tourism is one of the strongest foundations that builds the economy in the Province of Bali. The contribution of the accommodation and food and beverage service business field to the GRDP of the Province of Bali continues to increase
from year to year. This business field even had the largest contribution to the Bali Province
GRDP in 2017 compared to other business fields, which amounted to 23.33 percent. Even
directly or indirectly several other business fields have a positive impact from the
development of tourism in the Province of Bali, such as industrial business fields, trade, etc.
(Klungkung Regency Statistic, 2017).

Table 3.1.
Number of Administrative Regions by District in Klungkung Regency, 2016

<table>
<thead>
<tr>
<th>Kecamatan</th>
<th>Desa/Kelurahan</th>
<th>Dusun</th>
<th>Desa Adat</th>
<th>Banjar Adat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nusa Penida</td>
<td>16</td>
<td>80</td>
<td>40</td>
<td>157</td>
</tr>
<tr>
<td>2. Banjarangkan</td>
<td>13</td>
<td>55</td>
<td>30</td>
<td>75</td>
</tr>
<tr>
<td>3. Klungkung</td>
<td>18</td>
<td>60</td>
<td>23</td>
<td>90</td>
</tr>
<tr>
<td>4. Dawan</td>
<td>12</td>
<td>49</td>
<td>20</td>
<td>66</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>244</td>
<td>113</td>
<td>394</td>
</tr>
</tbody>
</table>

Source: BPS Kabupaten Klungkung Regency (https://klungkungkab.bps.go.id)

Table 3.2
Tourist Visits Data in Klungkung Regency 2015 - 2017

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>21.405</td>
<td>18.257</td>
<td>21.474</td>
</tr>
<tr>
<td>February</td>
<td>26.740</td>
<td>20.951</td>
<td>28.087</td>
</tr>
<tr>
<td>March</td>
<td>29.638</td>
<td>25.977</td>
<td>35.917</td>
</tr>
<tr>
<td>April</td>
<td>16.792</td>
<td>11.845</td>
<td>21.538</td>
</tr>
<tr>
<td>May</td>
<td>10.028</td>
<td>21.183</td>
<td>15.370</td>
</tr>
<tr>
<td>June</td>
<td>17.383</td>
<td>22.728</td>
<td>37.337</td>
</tr>
<tr>
<td>July</td>
<td>24.998</td>
<td>20.128</td>
<td>26.390</td>
</tr>
<tr>
<td>August</td>
<td>24.397</td>
<td>28.971</td>
<td>29.480</td>
</tr>
<tr>
<td>September</td>
<td>24.412</td>
<td>28.204</td>
<td>22.591</td>
</tr>
<tr>
<td>October</td>
<td>22.669</td>
<td>23.337</td>
<td>29.806</td>
</tr>
<tr>
<td>November</td>
<td>14.630</td>
<td>20.871</td>
<td>11.667</td>
</tr>
<tr>
<td>Total</td>
<td>255.079</td>
<td>265.545</td>
<td>293.364</td>
</tr>
</tbody>
</table>

Source: Klungkung Regency Tourism Office

Until October 16, 2016 the Yellow Bridge collapsed again at 18.30 WITA where at that
time there was a Nyepi Laut Hindu ceremony where all residents flocked to pray and
crossed from Nusa Ceningan Island to the temple of Hindu worship located on the island of
Nusa Lembongan. At that moment the bridge suddenly collapsed where at that time
around more than 70 people were on the bridge either on foot or using a motorcycle. Based
on information from the media, the incident killed 8 people, 1 was a toddler aged 3 years
and 2 children aged 6 and 8 years.
In order to support increasing the effectiveness and efficiency of the implementation of tasks and functions as well as adjusting the duties and functions of the Ministry of Public Works and Public Housing, it is necessary to improve the organization of the Technical Implementation Unit in the Ministry of Public Works and Public Housing and based on Republic of Indonesia Regulation Number 15 Year 2015 concerning the Ministry of PUPR and PUPR Minister Regulation Number 15 / PRT / M / 2015 concerning the Organization and Work Procedures of the Ministry of Public Works and Public Housing, it is necessary to organize the organization and work procedures of the Technical Implementation Unit in the Ministry of Public Works and Public Housing. Therefore, a new policy was issued namely PUPR Minister Regulation No. 20 / PRT / M / 2016 concerning the organization and work procedures of technical implementing units in the Ministry of PUPR.

The classification of roads according to their development authority is in accordance with Government Regulation No. 34 of 2006 concerning roads, that the authority for road development is grouped into national roads, provincial roads, district roads, city roads, village / nagari roads, and special roads.

In PUPR Minister Regulation No. 20 / PRT / M / 2016 concerning the Organization and Work Procedures of the Technical Implementation Unit in the Ministry of PUPR in Chapter IV of the UPT at the Directorate General of Highways Article 78 states that the UPT under the coordination of the Directorate General of Highways, consists of:

a. Center for the Implementation of National Roads;
b. National Road Implementation Office; and
c. Special Bridge and Tunnel Hall

Classification of Bridges and Road Tunnels can be found Regulation of the Minister of Public Works and Public Works concerning the security of bridges and road tunnels in Chapter II regarding the criteria and conception of road and bridge safety tunnels part one of article 4 regarding the classification of bridges and road tunnels that the classification of bridges is as follows:

a. Bridge with a span of at least 100 m
b. A curved bridge with a span of at least 60 m, a suspension bridge and a cable-lined bridge
c. Bridges with a total length of at least 3,000 m
d. Bridges with pillar heights above 40 m  
e. A road tunnel with a closed section length of at least 200 m  
f. Road tunnels that use drilling / jacking in the implementation method  
g. Bridges and road tunnels that have high structural complexity or have high strategic value or are designed using new technology

1. Monitoring of Yellow Bridge Policy Results

Monitoring or monitoring is a policy analysis procedure that is used to provide information about the cause and effect of public policy. Monitoring intends to establish a factual premise about public policy, only recommendations and evaluations are really intended to make a systematic analysis of various value premises. Thus, monitoring produces clear conclusions during and after policies are adopted and implemented or ex facto, Daniel and Paul in Dunn (1998: 509). In this study, researchers use the function in policy analysis of monitoring taken from William N. Dunn monitoring policy results. Monitoring plays at least four functions in policy analysis: explanation, accounting, inspection and compliance. Below this will be explained one by one regarding monitoring the results of the yellow bridge supervision and maintenance policy with a policy analysis from Dunn:

1.1.1. Explanation Function in Monitoring the Yellow Bridge Supervision and Maintenance Policy

In the case of the collapse of the yellow bridge beyond the beauty and exotic panorama surrounding the bridge, it turns out that the yellow bridge is quite dangerous. It was also mentioned that the Bali Provincial Public Works Department hopes that the proposed funding to the central government of Rp. 45 billion for the construction of a bridge connecting Nusa Lembongan Island with Nusa Ceningan, Klungkung Regency, can be realized in 2015. Based on the results of interviews and information obtained by researchers in the field that in Law No. 38 of 2004 concerning roads, PP No. 26 of 2006 concerning regulation, supervision of development and development (Turbinwasnan) stated that construction and supervision are divided into each road. With the unclear policy on the authority of the supervision and maintenance of the yellow bridge, causing the implementation of monitoring and maintenance policies to be less
than optimal. So it becomes one of the causes of the collapse of the yellow bridge.

1.1.2. Accounting Functions in Monitoring the Yellow Bridge Supervision and Maintenance Policy

Monitoring or monitoring in accounting produces useful information for accounting for social and economic changes that occur after the implementation of a number of public policies from time to time. For example, changes in quality of life can be monitored with certain social indicators such as education level, population percentage and income level.

There are several obstacles when researchers carry out data collection on direct visits of tourists who come both to Nusa Lembongan and Nusa Ceningan. This is because the boats that come from different districts of Klungkung Regency. So all boats departing for Nusa Lembongan come from ports in Denpasar Municipality while Nusa Lembongan is located in Klungkung Regency. The local government of Klungkung Regency is also aware of its shortcomings because they do not record at the Nusa Lembongan port when guests enter the island so that the exact number of guests who visit is not detected. All this time, the Klungkung Regency Tourism Office has taken notes through tourist objects visited on Nusa Lembongan and Nusa Ceningan Island and the data has become incomplete.

The socio-economic impact due to the collapse of the Yellow Bridge was felt by the community and stakeholders of tourism service entrepreneurs around Nusa Lembongan Island and especially Nusa Ceningan Island. This was revealed from the results of researchers' interviews with several stakeholders and also the results of interviews obtained from the collection of documentation through online media.

Not only did it suffer from social, economic and tourism impacts but the collapse of the yellow bridge in Nusa Lembongan also caused a psycho traumatic impact on the families and friends of victims who died that could never be replaced by material. This is an example of the impact of public policies that are not well implemented or not implemented at all.
1.1.3. Auditing Function in Monitoring the Yellow Bridge Supervision and Maintenance Policy

In formulating the strategy of monitoring and maintaining policy on roads and bridges in the regions, it cannot be separated from the existing policy products. The existing policy is the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia No. 20 / PRT / M / 2016 concerning the Organization and Work Procedures of Technical Implementing Units in the Ministry of Public Works and Public Housing. In Chapter II about the criteria and conception of bridge and tunnel safety the second part of the two Bridge and tunnel tunnel security providers.

But why isn't the execution going smoothly? Here there is a policy gap between the Central Government and regional governments. In the case of a collapsing yellow bridge, several examples of authority are found in the following interview examples. The Ministry of Public Works and Public Housing (PUPR) fielded a team from the Research and Development Agency (Balitbang) to the Yellow Bridge in the collapsed Klungkung, Bali. This is based on data obtained from the Public Communication Bureau of the Ministry of PUPR, Litbang PU.

The budget for the construction of roads and bridges is sourced from the APBN / APBD as stipulated in the Law on the State Budget, the Law on Financial Balance between the Central Government and Regional Governments, and the PP on the Balance Funds. The development funds are obtained from state / regional revenues as well as from foreign loans or grants.

The researcher also conducted an in-depth interview with the Head of the Technical Service Unit for the Implementation of the National Road Region II of Bali Province Adwin S. Lontoh regarding the mechanism of bridge construction as well as how the supervision and maintenance after the bridge was built which was quoted in the interview as follows:

"If the construction has been completed, if the development is carried out by the regional government, the supervision and maintenance will be carried out by the regional government. But if funded by the private sector or the central or provincial government, after the construction is
finished, an official report will be made and handed over to the regional government for further supervision and maintenance. The problem of the suspension bridge is the Yellow Bridge in Nusa Ceningan when it collapsed, the bridge was rebuilt using central funds or assistance from the central government to help local or district governments through the instructions of the Minister of PUPR. (Adwin S Lontoh, 2017).

1.1.4. Compliance Function in Monitoring the Yellow Bridge Supervision and Maintenance Policy

The Compliance function in monitoring is useful for determining whether the actions of program administrators, staff and other actors are in accordance with the standards and procedures established by legislators, government agencies and professional institutions. Bridge maintenance and supervision standards can be seen in the Bridge Implementation Supervision Guidelines issued by the Directorate General of Highways of the Republic of Indonesia Ministry of Public Works in Part I, Matters relating to the Administration and Procedures for bridge maintenance and supervision. As stated in the guidelines, it states that:

"The purpose of this Supervision Supervision Guide is to improve the quality of management of the bridge construction process and improve the quality of bridge implementation. This guide contains standard procedures and guidelines that need to be followed in implementing supervision of bridge projects. The use of appropriate and uniform supervision procedures will help ensure that the construction of the bridge is completed within the available time and funds, and will be carried out according to specifications. Improving the quality of implementation will reduce the need for bridge maintenance and rehabilitation before its use period."

In the case of human resources that have been specifically owned by the National Center for Implementation of National Road VIII, there are human resources consisting of 1 Primary High Management Officer, 5 Administrator Officers, and 11 Supervisory Officers. The National Center for Implementing National Road VIII with a total of 12 Work Units (Work Units) has 12 units and the Total PPK (Commitment Making Officials) is 44 people.

From the explanation stated in the Strategic Plan of the Ministry of Public Works and Public Housing 2015-2019 above, it can be concluded that in every implementation of development, particularly the construction of public works infrastructure and public housing, must always be based on the principle of sustainable development that takes into account the carrying capacity besides the results of development can be utilized for the current generation can also be passed on to future generations.

2. Distribution Model of Suspension and Maintenance of Suspension Bridge

Through Law Number 23 of 2014 concerning Regional Government as a constitutional effort to encourage improvement in the performance of regional government through regional innovation. This Government Regulation regulates the form and criteria, proposals and stipulations, trials, implementation, assessment, awarding, dissemination, utilization of funding as well as guidance and supervision. Regarding portraits of regions considered to have made innovative breakthroughs and have shown significant improvements to the welfare of the community.

In order to realize proportional distribution of authority proportionally between the central government, provincial regions, regencies and cities, criteria have been compiled that include externalities, accountability, and efficiency by considering the harmonious relations of management of government affairs between levels of government. In its implementation, government affairs submitted to the regions must also be accompanied by funding sources, the transfer of facilities and infrastructure, and staffing in accordance with decentralized affairs (Adi Suryanto. 2008: 25-26).

Legislation regarding the division of governmental affairs between the government, provincial and district / city government is set forth in Indonesian Government Regulation no. 38 of 2007. In this regulation it is mentioned in one of the
articles that the provincial and regency / city government regulates and manages
government affairs based on criteria for the distribution of government affairs based on
externality, accountability and efficiency criteria by taking into account the harmonious
relations between levels and / or the composition of government is its authority.

The case of the collapse of the yellow bridge in Nusa Ceningan which claimed
many lives on October 16, 2016 is also a case study of the policy being not
implemented. Where authority throws authority between the central, provincial and
district areas. At the time of development using APBN funds, everything was in
accordance with procedures, but after that the provincial and district governments
threw authority over each other in supervision and maintenance. That is because no
asset data and news of the event were found when the bridge was completed.

The researcher conducted an open interview during the IAPA Conference in
Palangkaraya on October 11, 2018 with the Director General of Highways, Ir.
Sugiyartanto, MT, who was the keynote speaker at the conference. The researcher
asked about the mechanism for monitoring and maintaining the yellow bridge case
that collapsed in Nusa Lembongan when the bridge was built with APBN funds but
the bridge is in the Regency area. Sugiyartanto answered:

"Especially the yellow bridge in Nusa Lembongan, Bali, was indeed
built with APBN funds, and it was continued to be handed over to
the regions, because of that regional authority. Assets are also
transferred to the regions. Governance for Bina Marga develops not
the area of authority for guidance. Differentiate between what
sources of funds to build and after which the area of authority has
been established. At the time it was handed over in the Regency the
process of maintaining the fallen yellow bridge had actually been
given a warning by the center. What I always remind to the
organizational organs that manage in local government, can build
other parties or the central government, this is an example of
collaboration in its maintenance. Maintenance is actually relatively
mild, but not done or never seen in terms of its function. This means
that the assets that we have done are ostensibly wasteful because of poor and proper maintenance. (Sugiyartanto. 2018).

In the attachment of the explanation of Indonesian government regulation no. 38 of 2007 concerning the division of governmental affairs between the central government, the provincial regional government and the regional government of the municipality in Article 14 Paragraph (1) The remaining national or cross-provincial governmental affairs are the authority of the Government, the provincial or cross-district / city-level government becomes the authority of the government provincial areas, and regency / city scale which becomes the authority of regency / city regional government. Paragraph (2) The stipulation is intended to avoid the occurrence of mutual claims between levels and / or the composition of the government.

As it is known that the function of road and bridge maintenance and supervision is under the authority of BBPJN. This work unit itself is under the Director General of Highways. Its duties include carrying out the planning, procurement, construction and preservation of roads and bridges, the application of quality management systems, the quality control of work implementation, the supply and testing of materials and equipment as well as the safety and feasibility of the functions of roads and bridges in accordance with statutory provisions. In many policies, implementing a policy needs support and coordination with other agencies. For this reason, coordination and cooperation between agencies is needed for the success of a policy. In the 2010-2014 Strategic Plan report of the Ministry of Public Works, the Directorate General of Highways said that although in terms of quantity the number of employees was relatively large, when viewed from the aspect of quality and distribution of distribution according to the workload of each work unit, there was still a very large gap.

This comes from the form and structure and organizational structure that has not been able to answer all the functions of the Directorate General of Highways. Other aspects that still need improvement include organizing work units in the field, formulating work relationships between DGs. Bina Marga with regional offices,
internal control aspects so that practices of violations of the provisions especially those that have the potential to harm state finances.

3. Distribution Model of Suspension and Maintenance of Suspension Bridge

The control of infrastructure in the form of roads and bridges rests with the Government and Regional Governments, which in the administration are delegated and / or handed over to agencies in the region or given to business entities or individuals. Delegation and / or handover of authority for the operation of roads and bridges does not relinquish government responsibilities. The existence of regional autonomy, the operation of roads and bridges are separated based on their authority as regulated according to Article 14, Article 15 and Article 16 of Law No. 38 of 2004 concerning Roads, namely:

1. The authority of the Government in the administration of roads includes the administration of roads in general and the administration of national roads [Article 14 paragraph (1)]

2. The authority of the provincial government in managing roads includes the administration of provincial roads [Article 15 paragraph (1)]

3. The authority of the regency government in managing roads covers the administration of regency roads and village roads [Article 16 paragraph (1)]

4. The authority of the city government in the administration of roads includes the administration of city roads [Article 16 paragraph (2)].

Another thing is because before the yellow bridge collapsed the provincial government and the district government threw authority over each other because of unclear ownership of the bridge assets between the province or district. Because of the findings above, the advice given by several informants in overcoming the unclear authority of the supervision and maintenance of the yellow bridge and the weakness of the policy was obtained from several informants.

The following table shows the existing model of distribution of bridge supervision and maintenance authority analyzed from the yellow bridge case study which is included in the top to down suspension bridge category.
<table>
<thead>
<tr>
<th>Status</th>
<th>National Bridge</th>
<th>Provincial Regional Bridge</th>
<th>City / Regency Regional Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bridge Affairs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td>Balai Besar Pelaksana Jalan Nasional (Center for Implementing National Roads)</td>
<td>Balai Besar Pelaksana Jalan Nasional (Center for Implementing National Roads)</td>
<td>Balai Besar Pelaksana Jalan Nasional (Center for Implementing National Roads)</td>
</tr>
<tr>
<td>Supervision</td>
<td>Balai Besar Pelaksana Jalan Nasional (Center for Implementing National Roads)</td>
<td>UPT Satuan Kerja Sesuai Wilayah Masing-masing (UPT Work Unit According to Each Region)</td>
<td>UPT Satuan Kerja Sesuai Wilayah Masing-masing (UPT Work Unit According to Each Region)</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Balai Besar Pelaksana Jalan Nasional Sesuai Wilayah Masing-masing (Center for Implementing National Roads in Accordance with Each Territory)</td>
<td>Bidang Bina Marga PUPR Provinsi (Bina Marga PUPR Province)</td>
<td>Bidang Bina Marga PUPR Kota/Kabupaten (Division of Public Works PUPR City / Regency)</td>
</tr>
<tr>
<td>Maintenance Budget</td>
<td>Direktorat Jenderal Bina Marga (Directorate General of Highways)</td>
<td>Bidang Bina Marga PUPR Provinsi/Gubernur (Provincial PUPR / Bina Marga Division)</td>
<td>Bidang Bina Marga PUPR Kota/Kabupaten/Walikota /Bupati PUPR (City / Regency / Mayor / Regents Bina Marga Division)</td>
</tr>
<tr>
<td>Nature of Authority</td>
<td>Terikat (Bound)</td>
<td>Terikat (Bound)</td>
<td>Terikat (Bound)</td>
</tr>
</tbody>
</table>

*Source: Results of the researchers themselves*
From the results of the processed table above, because all authority is at the center and when there are cases where the disposition is unclear, the researcher recommends that the distribution model of authority below can then be used as a reference for improving the bridge supervision and maintenance policy, especially the suspension bridge which is generally located more remote and in the village as below:

**Table 3.4. Suggestion Distribution Model for Suspension and Maintenance of Suspension Bridge**

<table>
<thead>
<tr>
<th>Status</th>
<th>National Bridge</th>
<th>Provincial Regional Bridge</th>
<th>City / Regency Regional Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bridge Affairs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td>Balai Besar Pelaksana Jalan Nasional (Center for Implementing National Roads)</td>
<td>Balai Besar Pelaksana Jalan Nasional (Center for Implementing National Roads)</td>
<td>Bidang Bina Marga PUPR Kota/Kabupaten (Division of Public Works PUPR City / Regency)</td>
</tr>
<tr>
<td>Supervision</td>
<td>Balai Besar Pelaksana Jalan Nasional (Center for Implementing National Roads)</td>
<td>UPT Satuan Kerja Sesuai Wilayah Masing-masing (UPT Work Unit According to Each Region)</td>
<td>UPT Satuan Kerja Sesuai Wilayah Masing-masing, Bidang Bina Marga PUPR Kota/Kabupaten, Kepala Desa, BPBD (UPT Work Unit According to Each Region, City / Regency Public Works Bina Marga PUPR, Village Head, Regional disaster management agency)</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Balai Besar Pelaksana Jalan Nasional Sesuai Wilayah Masing-masing (Center for Implementing National Roads in Accordance with Each Territory)</td>
<td>Bidang Bina Marga PUPR Provinsi (Bina Marga PUPR Province)</td>
<td>Bidang Bina Marga PUPR Kota/Kabupaten/BPBD/Camat/Kepala Desa (Bina Marga PUPR City / Regency / Regional disaster management agency/ Sub-District / Village Head)</td>
</tr>
<tr>
<td><strong>Development Budget</strong></td>
<td>Direktorat Jenderal Bina Marga/Swasta (Directorate General of Highways / Private)</td>
<td>Direktorat Jenderal Bina Marga/Swasta/Instansi Lain (Directorate General of Highways / Private/ Other agencies)</td>
<td>Direktorat Jenderal Bina Marga/Swasta/Instansi Lain (Directorate General of Highways / Private/ Other agencies)</td>
</tr>
<tr>
<td><strong>Supervision Budget</strong></td>
<td>Direktorat Jenderal Bina</td>
<td>Direktorat Jenderal Bina Marga</td>
<td>Direktorat Jenderal Bina Marga (Directorate</td>
</tr>
<tr>
<td>Maintenance Budget</td>
<td>Directorate General of Highways</td>
<td>General of Highways</td>
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<td></td>
</tr>
<tr>
<td>Direktorat Jenderal Bina Marga (Directorate General of Highways)</td>
<td>Bidang Bina Marga PUPR Provinsi/Gubernur (Provincial PUPR / Bina Marga Division)</td>
<td>Bidang Bina Marga PUPR Kota/Kabupaten, Walikota, Bupati, BPBD, instansi dinas lainnya, Pihak swasta Division of City / Regency Public Works PUPR, Mayor, Regent, Regional disaster management agency, other service agencies, private parties</td>
<td></td>
</tr>
<tr>
<td>Nature of Authority</td>
<td>Terikat (Bound)</td>
<td>Terikat (Bound)</td>
<td>Flexible</td>
</tr>
</tbody>
</table>

Source: Results of the researchers themselves

Based on the Minister of Home Affairs regulation number 17 of 2007 concerning Technical Guidelines for the Management of Regional Property, the management of regional property covers: planning of needs and budgeting, procurement, receiving, storage and distribution, use, administration, utilization, security and maintenance, assessment, deletion, transfer, guidance, supervision and control, financing and claim for compensation.

Conclusion

Based on description aboves, the conclusion for the research as follow:

1.2. The factor causing the collapse of the yellow bridge connecting the islands of Nusa Lembongan and Nusa Ceningan is due to the unclear distribution of authority in the supervision and maintenance of the yellow bridge between the Bali provincial government and the Klungkung district government.

1.3. The unclear position of the assets of the yellow bridge caused the maintenance of the bridge to be displaced, causing casualties.

1.4. According to the Director General of Highways (Direktorat Jendral Bina Marga) and based on PUPR Regulation No. 41 of 2015, it has been explained about the implementation of bridge and road tunnel security, but without disposition of assets there will still be authority tossing in the maintenance of the yellow bridge also related to the budget.
1.5. The case of the collapse of the yellow bridge had a detrimental impact on the people of Lembongan Village and Ceningan Village, in addition to social, economic and tourism impacts, the most important of which was the psychotraumatic impact felt by the families of the victims who were left behind due to one or several of their families dying.

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