

**PREPARATION OF UNIT PRICE STANDARDS (SSH) IN THE FIELD OF WATER RESOURCES
AT THE PUPR OFFICE OF KERINCI REGENCY T.A 2023 (Case study of Preparation of Price
Unit Standards in SiReview Laut District)**

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Abstract

The price unit mark is an important reference in planning, supervising, and implementing a construction project. Standard unit prices also help avoid differences in price interpretation and minimize the risk of price changes that can affect success in a project. Consistent and reliable price charges for parties involved in planning activities.

Keywords: *planning, standard unit price, construction project*

INTRODUCTION

Agriculture in Kerinci district, especially rice paddy fields, cannot be separated from the support of abundant water sources ranging from the homecoming area to the downstream area, all of which are the main factors in supporting agriculture. In addition, the construction of good and adequate irrigation facilities and infrastructure will greatly help in the process of meeting the needs of rice field water.

Based on PUPR ministerial regulation No. 30/PRT/M/2025 concerning the development and management of irrigation systems, irrigation is an effort to provide, regulate, and dispose of irrigation water to support agriculture, whose types include surface irrigation, swamp irrigation, underground water irrigation, pump irrigation, and pond irrigation.

In order to achieve food self-sufficiency in Kerinci district, of course, the role of the government is needed to support agriculture, especially rice fields, such as the construction of irrigation, weirs, reservoirs and others, all of which require considerable costs and are the responsibility of the government.

The field of water resources in this case is an extension of the Kerinci district government, which is one of the organizational units of the regional apparatus in charge of these activities, it should be at the forefront, especially in determining the estimated costs for the construction of rice field irrigation construction to achieve food self-sufficiency.

Infrastructure development and careful planning are key factors to achieve the success of a project, one important aspect in planning a construction is the provision of relevant unit price standards in supporting planning activities.

Based on Kerinci Regent Regulation Number 16 of 2022 concerning unit price standards, the Kerinci district government is used in planning and implementing regional revenue and expenditure budgets.

The primary purpose of unit price standards is to provide consistent and reliable pricing guidance to parties involved in planning activities. Using standard unit prices, planners can estimate the total cost required in a construction project.

Based on its function, the unit price standard becomes an important reference in planning, supervising, and implementing a construction project. Standard unit prices also help avoid differences in price interpretation and minimize the risk of price changes that can affect success in a project.

Standard unit prices are dynamic and need to be updated regularly following market price developments. This change was made to maintain the accuracy and relevance of the unit price standard with real conditions in the field. This scientific paper includes the preparation of standard unit prices of goods from the results of surveys that the author conducted to obtain information from building shops covering various categories of building goods, such as materials, processed materials, wood materials, shop materials and other materials that the author hopes can provide useful guidance for the field of water resources at the public works and public housing office of Kerinci district in making more cost estimates Accurate in construction project planning.

According to Presidential Regulation (Perpres) No. 33 of 2020 concerning Regional Unit Price Standards, it is the unit price of each unit of goods/services applicable in a region/region. The determination of unit price standards is determined by decision of the Regional Head by considering regional price standards by taking into account the principles of efficiency, effectiveness, propriety and fairness.

Based on the regulation of the Regent (Perbup) of Kerinci number 16 of 2022 concerning the unit price standards of the Kerinci district government, the standard price of goods and services is a guideline for the construction of goods and services according to type, specification and quality as well as the highest price in a certain period.

In budget planning, standard unit prices function as:

1. The highest limit whose magnitude cannot be exceeded in the preparation of work plans and budgets of regional apparatus work units.
2. Reference for the preparation of forward forecast projections.
3. Indicative ceiling calculation material for regional budget

Guided by the standard unit price in preparing planning, it is expected to create transparency and consistency in budgeting planning for a construction project. In addition, the standard unit price also helps in preventing price discrepancies in project implementation

RESEARCH METHOD

The location where this research was carried out was in building shops in SiReview Laut District, Kerinci Regency. The object of research is something that will be researched to obtain the desired data with the aim of studying and evaluating the data until finally conclusions can be drawn. The objects of research are 3 (three) building shops in SiReview Laut sub-district, namely Fria Bangunan store, Jaya Bersama store, and Azkal & Akbar Bangunan store.

From these building shops, it is expected that a price list of building materials will be obtained, the building materials in question are materials commonly used in the implementation of construction work, including excavated materials, processed materials, wood materials, shop materials and other materials.

The following are details of the materials that will be carried out research at building stores, namely:

1. Excavated Material
 - a. Sand Couple
 - b. Concrete Sand
 - c. Split Stone
 - d. Keriki/Aggregate
2. Processed Materials
 - a. Thread Door 60 X 60
 - b. Door Thread 70 X 70
 - c. 80 X 80 Threaded Door
 - d. Door Thread 100 X 100
 - e. Threaded door 120 x 150
 - f. 120 X 200 Threaded Door
 - g. Geared Steel Sorong Watergate
3. Wood Material
 - a. Scaffolding wood/Rafters
 - b. Rafters 5/7 cm class III
 - c. Board 3/20 cm

- d. Plywood 3.6 mm
 - e. 9 mm multiplex
 - f. Wood Dolken Ø 8 – 10 cm
4. Shop Material
- a. Portland Cement
 - b. Plain concrete iron/thread
 - c. Wiremesh M8
 - d. Wiremesh M10
 - e. Gabion Fabrication D 2.7 mm
 - f. Concrete Wire
 - g. Nails 2" – 3"
 - h. Zinc spikes
 - i. Zinc Wave BJLS 20
 - j. Oil Paint
 - k. Electric Welding Wire
 - l. PVC Pipe Ø 2"
 - m. Hammer/Sledgehammer
 - n. Hacksaw
 - o. Concrete Chisel
 - p. Crowbar
5. Other Materials
- a. Protective Hat
 - b. Mask
 - c. Safety Gloves
 - d. Safety shoes
 - e. Plastic sack / bagor
 - f. Plastic strap / Rapia

Data Sources

1. Primary Data

According to Arikunto (2013) Primary data are data in the form of verbal or spoken words orally, gestures or behaviors carried out by trustworthy subjects, in this case are research subjects (informants) with respect to the variables studied. The primary data in this study the author obtained through building shops by conducting direct interviews with shop owners.

2. Secondary Data

The secondary data in this study is supporting data that the author obtained from related agencies, namely the public works and public housing office, in this case,

specifically in the field of water resources. According to Sugiyono (2018) states that secondary data is a data source that does not directly provide data to data collectors.

Research Steps

To support the research, here the author describes the stages and steps taken to support research activities:

1. Preparatory stage

The Preparatory Stage is the pouring of ideas or ideas by conducting literature and regulatory studies, problem formulation, determining research objectives, methods used where the results will be poured into the form of background, problem formulation and problem limitations.

2. Data collection stage

At this stage the author conducts a direct review of the location where there are the necessary data sources, in this case conducting a survey to building stores to get a unified price list of goods by conducting direct interviews with shop owners.

3. Data processing stage

The data that has been obtained from the survey results is carried out in the data processing stage by analyzing the price of unity of goods.

4. Decision-making stage

At this stage, the data that has been processed / analyzed is made a conclusion related to the purpose of the study.

RESULT AND DISCUSSION

The research activities that the author carried out in building stores, the author determined by choosing several building stores with a large enough scale and frequented by consumers. The building stores that the author refers to here are Fria Bangunan store, Jaya Bersama store, and Azkal & Akbar store located in SiReview Laut district.

The selection of building stores is carried out with the aim of obtaining more accurate data on the prices of building goods and price variations. Building stores with a large scale and crowded tend to have a more complete variety of products and attract the attention of more consumers, so the price information obtained will later represent prices from other building stores in SiReview Laut sub-district.

In the research process that the author conducted, the collection of unit price data for building goods was carried out using quantitative methods, where quantitative research is interpreted as research that uses a lot of numbers, starting from the process of data collection, data analysis and data appearance (Siyoto & Sodik, 2015).

In addition, the process to obtain data or information about the price of goods in building stores, the author does with qualitative methods, in qualitative research, researchers are the main instruments that are required to be able to adapt to the research

environment so that, researchers who apply qualitative methods must be armed with theory and broad insight in order to conduct direct interviews, analyze and construct the object under study to be clearer. Research with this approach emphasizes more on meaning and is tied to values (Siyoto & Sodik, 2015).

The research process carried out in three building stores, which is as follows:

1. Preliminary preparation

The author prepares everything that will later support the research process, such as price lists of goods, stationery, and documentation tools.

2. Visit the store

At this stage the author made a visit to three building stores based on the schedule that had been made.

3. Interview

The author conducted a direct interview with the owner of the building shop based on a question list in the form of a list of prices of goods that the author had previously prepared.

4. Documentation

After the interview, the author then took documentation in the form of photos at the time of the interview, as well as photos of building stores.

Data Analysis

Standard Reference Unit Price

Based on the research process that the author has conducted on the three building stores, the results are obtained in the form of a temporary item price list which will later become a reference for standard unit prices in the field of water resources, as well as photo documentation in each building store, which will then be carried out the data analysis process. The thing that needs to be done for equalization / equalization of unit standards of goods is to convert units based on the price of goods, so that the same unit standard will be obtained, which for unit standards refers to the unit standards used by the water resources sector.

Unit conversion generally means converting the value of one system of units to another unit value. Unit conversions generally never change the value of a quantity (Wikipedia 2023).

In addition to the problem of unit differences, the author also found price differences between the three building stores, this price difference occurs in almost every item of goods, for example in the sub-material of the store, namely the price of cement at the Jaya Bersama store Rp. 76,000 / zak while at the Jaya Bersama store and the Azkal and Akbar Bangunan stores only Rp. 75,000 / zak. To overcome the problem of price differences in the three building stores, the author is guided by Kerinci Regent regulation no. 16 of

2022, that the standard price of goods is set according to type, specification and quality as well as the highest price in one period.

Here the author does the conversion process of several items that experience differences in units which will later be obtained the same unit based on the price of goods in three building stores.

a. Fria Store Building

1) Rafters 5/7 cm class III

Known rafter price = Rp. 30.000 / btg

Vol / btg = $0.05 \times 0.07 \times 4$

$$= 0.014 \text{ m}^3$$

To obtain the number of bars in 1 m³ are:

$$\text{Vol} = 1 / 0.014$$

$$= 71.43$$

$$= 71 \text{ btg/m}^3$$

So that you get 1 m³ of rafters price: $30,000 \times 71 = \text{Rp. } \underline{\underline{2,130,000}}$

2) Board 3/20

Known rafter price = Rp. 36.000 / btg

Vol / btg = $0.03 \times 0.20 \times 4$

$$= 0.024 \text{ m}^3$$

To obtain the number of bars in 1 m³ are:

$$\text{Vol} = 1 / 0.024$$

$$= 41.67$$

$$= 42 \text{ btg/m}^3$$

So that you get 1 m³ of board price: $36,000 \times 42 = \text{Rp. } \underline{\underline{1,512,000}}$

3) Portland cement (PC)

Known cement price = Rp. 75.000 / zak

1 zak of cement = 50 kg

$$\text{So } 75,000 / 50 = 1,500$$

So that the price / kg of cement is: **Rp. 1,500**

4) Wiremesh M8

Known price of wiremesh m8 / sheet = Rp. 900.000

Where the weight of iron wiremesh m8 = 61.79 kg (Jaya steel 2023)

$$\text{So } 900,000 / 61.79 = 14,565.46$$

So the price of wiremesh m8 / kg = **Rp. 14.565**

5) Wiremesh M10

Known price of wiremesh m10 / sheet = Rp. 1.300.000

Where the weight of iron wiremesh m10 = 96.54 kg (Jaya steel 2023)

So $1,300,000 / 96.54 = 13,465.92$

So the price of wiremesh m10 / kg = **Rp. 13.466**

b. Toko Jaya Bersama

1) Rafters 5/7 cm class III

Known rafter price = Rp. 30.000 / btg

Vol / btg = $0.05 \times 0.07 \times 4$

= 0.014 m³

To obtain the number of bars in 1 m³ are:

Vol = $1 / 0.014$

= 71.43

= 71 btg/m³

So that you get 1 m³ of rafters price: $30,000 \times 71 =$ **Rp. 2,130,000**

2) Board 3/20

Known rafter price = Rp. 37.000 / btg

Vol / btg = $0.03 \times 0.20 \times 4$

= 0.024 m³

To obtain the number of bars in 1 m³ are:

Vol = $1 / 0.024$

= 41.67

= 42 btg/m³

So that you get 1 m³ of board price: $37,000 \times 42 =$ **Rp. 1,554,000**

3) Portland cement (PC)

Known cement price = Rp. 76.000 / zak

1 zak of cement = 50 kg

So $76,000 / 50 = 1,520$

So that the price / kg of cement is: **Rp. 1,520**

4) Wiremesh M8

Known price of wiremesh m8 / sheet = Rp. 875.000

Where the weight of iron wiremesh m8 = 61.79 kg (Jaya steel 2023)

So $875,000 / 61.79 = 14,160.87$

So the price of wiremesh m8 / kg = **Rp. 14.161**

5) Wiremesh M10

Known price of wiremesh m10 / sheet = Rp. 1.250.000

Where the weight of iron wiremesh m10 = 96.54 kg (Jaya steel 2023)

So $1,250,000 / 96.54 = 12,948$

So the price of wiremesh m10 / kg = **Rp. 12.948**

c. Azkal Shop & Akbar Building

1) Pair sand, concrete sand, and gravel/aggregate

Known price = Rp. 330.000 / pickup

Where the dimensions of the L300 pickup box = 0.31x1.6x2.63 (Firdaus Ali 2022)

So vol = 0.31x1.6x2.63

= 1.30 m³

So the price for 1 m³ = 330.000/1.30 = Rp. 253.846

rounded up to = Rp. **254.000**

2) Split Stone

Known stone price = Rp. 450.000 / pickup

Where the dimensions of the L300 pickup box = 0.31x1.6x2.63 (Firdaus Ali 2022)

So vol = 0.31x1.6x2.63

= 1.30 m³

So the price for 1 m³ stone = 450.000/1.30 = Rp. 346.154

Rounded up to = Rp. **346.000**

3) Wood Dolken Ø 8 – 10

Known price of dolken wood = 11.000 / btg

Where wood length = 4 m

So get the price of 1 meter of dolken wood = 11,000/4 = **Rp. 2,750**

4) Portland cement (PC)

Known cement price = Rp. 75.000 / zak

1 zak of cement = 50 kg

So 75,000 / 50 = 1,500

So that the price / kg of cement is: **Rp. 1,500**

5) Iron concrete plain / threaded

It is known that the price of 1 plain iron rod Ø10 = Rp. 88,000

Where 1 iron rod Ø10 weighs = 7.40 kg (PT. Indosteger Jaya Perkasa 2022)

So for the price of 1 kg of plain iron = 88,000/7.4 = **Rp. 11,892**

6) Zinc Wave BJLS 20

It is known that the price of 1 wave zinc kodi = Rp. 1.230.000

Where 1 kodi zinc wave = 20 sheets

So the price of 1 sheet of corrugated zinc = 1,230,000/20 = **Rp. 61,500**

After the conversion process is complete, the following author captures the price list of goods at three building stores to analyze the price comparison between the building stores, which will later obtain the highest price list as well as the final price list that will

represent the price list of each building store in SiReview Laut sub-district. The recap list of goods prices in the three building stores can be seen in table 4.5.

Table 4.5. List of recaps of prices of goods at three building stores

No	Item Name	Unit	Price of goods in the building store (Rp.)		
			Fria Building	Jaya Bersama	Azkal & Akbar Building
A	Excavated Material				
1	Sand Couple	M3	250.000	200.000	254.000
2	Concrete Sand	M3	250.000	175.000	254.000
3	Split Stone	M3	300.000	350.000	346.000
4	Gravel / Aggregate	M3	250.000	250.000	254.000
B	Processed Materials				
1	Thread Door 60 X 60	Unit	-	-	5.000.000
2	Door Thread 70 X 70	Unit	-	-	6.000.000
3	80 X 80 Threaded Door	Unit	-	-	6.000.000
4	Door Thread 100 X 100	Unit	-	-	7.500.000
5	Threaded door 120 x 150	Unit	-	-	10.000.000
6	120 X 200 Threaded Door	Unit	-	-	12.000.000
7	Geared Steel Sorong Watergate	Unit	-	-	35.000.000
C	Wood Material				
1	Scaffolding/Rafters	M3	-	-	3.000.000
2	Rafters 5/7 cm class III	M3	2.130.000	2.130.000	3.000.000
3	Board 3/20	M3	1.512.000	1.554.000	2.000.000
4	Plywood 3.6 mm	Lmbr	68.000	67.000	66.000
5	Multiplex 9 mm	Lmbr	100.000	105.000	100.000
6	Dolken wood d8-10 cm	M1	-	-	2.750
D	Shop Material				

1	Portland Cement (50kg)	Kg	1.500	1.520	1.500
2	Iron Concrete Plain / Threaded	Kg	11.380	12.000	11.892
3	Wiremesh M8	Kg	14.565	14.161	-
4	Wiremesh M10	Kg	13.466	12.948	-
5	2.7mm D Fabricated Gabion	Brassiere	300.000	280.000	350.000
6	Concrete Rope Wire	Kg	22.000	23.000	20.000
7	Nail uk. 2" - 3"	Kg	20.000	20.000	20.000
8	Zinc Nails	Kg	23.000	23.000	22.000
9	Zinc Wave BJLS 20	Lmbr	65.000	66.000	61.500
10	Oil Paint	Kg	59.000	60.000	80.000
11	Electric welding wire	Kg	-	-	34.000
12	PVC Pipe Dia 2"	Brassiere	76.000	77.000	100.000
13	Hammer / Sledgehammer	Brassiere	85.000	83.000	100.000
14	Hacksaw	Brassiere	25.000	25.000	50.000
15	Chisel Concrete (Hard Steel)	Brassiere	35.000	35.000	30.000
16	Crowbar	Brassiere	30.000	30.000	60.000
E	Other Materials				
1	Safety Helmet	Brassiere	60.000	65.000	-
2	Respiratory and Oral Protection	Brassiere	20.000	20.000	-
3	Safety Gloves	Psg	20.000	20.000	20.000
4	Safety Shoes	Psg	100.000	100.000	100.000
5	Plastic Sack/ Bagor	Brassiere	-	-	4.000
6	Rapia / Plastic Strap	Brassiere	-	-	25.000

Based on the table above, to obtain the standard unit price (SSH) for the special water resources field in SiReview Laut sub-district, it is obtained by comparing the unit prices of goods in the three building stores to get the highest unit price, based on Regent Regulation number 16 of 2022.

The following is the final list of standard unit prices (SSH) for the Water Resources Sector for SiReview Laut sub-district which the author summarizes in the following table:

Final list of Standard Unit Price (SSH) for Water Resources
SiReview Laut sub-district

No	Item Name	Unit	Final price (Rp)
A	Excavated Material		
1	Sand Couple	M3	254.000
2	Concrete Sand	M3	254.000
3	Split Stone	M3	350.000
4	Gravel / Aggregate	M3	254.000
B	Processed Materials		
1	Thread Door 60 X 60	Unit	5.000.000
2	Door Thread 70 X 70	Unit	6.000.000
3	80 X 80 Threaded Door	Unit	6.000.000
4	Door Thread 100 X 100	Unit	7.500.000
5	Threaded door 120 x 150	Unit	10.000.000
6	120 X 200 Threaded Door	Unit	12.000.000
7	Geared Steel Sorong Watergate	Unit	35.000.000
C	Wood Material		
1	Scaffolding/Rafters	M3	3.000.000
2	Rafters 5/7 cm class III	M3	3.000.000
3	Board 3/20	M3	2.000.000
4	Plywood 3.6 mm	Lmbr	68.000
5	Multiplex 9 mm	Lmbr	105.000
6	Dolken wood d8-10 cm	M1	2.750
D	Shop Material		
1	Portland Cement (50kg)	Kg	1.520
2	Iron Concrete Plain / Threaded	Kg	12.000
3	Wiremesh M8	Kg	14.565
4	Wiremesh M10	Kg	13.466
5	2.7mm D Fabricated Gabion	Brassiere	350.000
6	Concrete Rope Wire	Kg	23.000
7	Nail uk. 2" - 3"	Kg	20.000
8	Zinc Nails	Kg	23.000
9	Zinc Wave BJLS 20	Lmbr	65.000

10	Oil Paint	Kg	80.000
11	Electric welding wire	Kg	34.000
12	PVC Pipe Dia 2"	Brassiere	100.000
13	Hammer / Sledgehammer	Brassiere	100.000
14	Hacksaw	Brassiere	50.000
15	Chisel Concrete (Hard Steel)	Brassiere	35.000
16	Crowbar	Brassiere	60.000
E	Other Materials		
1	Safety Helmet	Brassiere	65.000
2	Respiratory and Oral Protection	Brassiere	20.000
3	Safety Gloves	Psg	20.000
4	Safety Shoes	Psg	100.000
5	Plastic Sack/ Bagor	Brassiere	4.000
6	Rapia / Plastic Strap	Brassiere	25.000

CONCLUSION

Based on the research that has been done, the author can conclude several things as follows:

1. The price of goods in each building store is the basis or reference in compiling standard unit prices (SSH) in the field of water resources.
2. The determination of unit price standards (SSH) in the field of water resources is guided by Kerinci Regent regulation number 16 of 2022 concerning Kerinci district government unit price standards.
3. Standard unit prices serve as guidelines in budget planning and execution.

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