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PICTURE BOOK  
THE GOOD  
&  
THE BAD  
INFRASTRUCTURE

MISCELLANEOUS

Public Disclosure Authorized  
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PICTURE BOOK  
THE GOOD AND THE BAD INFRASTRUCTURE

# Miscellaneous

Irrigation - Electricity Supply - Market - School - Pier - Village Health Center

by :  
Ekarf Hartmann  
Heinz Unger

Picture Book

## **The GOOD and The BAD Infrastructure**

### **Miscellaneous**

Irrigation - Electricity Supply - Market - School - Pier - Village Health Center

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## INTRODUCTION

In addition to road and bridge as well as water supply and sanitation, some infrastructures such as irrigation, electricity supply, school, village health center, market and pier, have also play important roles in improving the community welfare in rural area.

Indonesia is one of agricultural country in the world, where majority of population who live in village working as farmer. However, it is quite ironic that out of 11,831,165 Ha of the total agricultural land, almost 50% are without irrigation channel. In fact, irrigation is the most important thing for farmer in dealing with the success of harvest. In several locations, we may even find dry lands, especially during long dry seasons, in spite of the source of water such as spring water, dams and rivers are not far from these location. It is a pity that those water sources could not be used for increasing the welfare of the people there.

Meanwhile, community who lives in the coastal area also have problems. *First*, they have difficulty to tie up the boats. A temporary pier, made of wood or pole which is implanted on the ground, so far can not guarantee that the ships will not be washed away because of rising tide. *Second*, this community also do not have any specific area for rubbish disposal. So, this situation has triggered dirty and unhealthy environment in the community.

Beside, the distance to the existing local market is always become a problem for farmers and fishermen in selling their product. In addition to the distance problem, a jump in oil price has caused high transportation cost which eventually becomes their additional burden. Moreover, the condition of local market themselves is usually lack of management, water-soaked, full of garbage and smelled.

In the meantime, the shortage of electricity supply in several locations in Indonesia, especially in the remote area has become an obstacle in term of economical problem for State Electricity Enterprise/*Perusahaan Listrik Negara* (PLN). It is because the electricity supply very much influences their daily activities.

The other infrastructure such as school and village health center also take important part in improving the quality of life of villagers. Sometimes we find the school with bad condition; fallen down roof, improper furniture, narrow class, and the condition of village health which is not clean enough. These conditions would effect the uncomfortable situation. At school, teachers and students may not conduct a proper learning process. While in the village health center, the community seems reluctant to use the existing facilities due to dirty and unclean situation.

All the above problems need to be solved immediately. Actually, what the community needs is only a small scale technical system, with a very simple methods and easier to be implemented by community themselves. For example, community can use a generator or micro hydro power for electricity supply instead of instruments from the PLN. Moreover, community willing to give contribution in form of land, labour or even money as

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happens in the Kecamatan Development Program (KDP).

Kecamatan Development Program (KDP) is one of the community-based development program, where the community involve in every step of the process start from planning, implementation and maintenance. Even though all the process of construction done by community, does not mean the quality is low.

Many lessons have been learned from more than seven years of KDP implementation especially in small scale infrastructure. In fact, some infrastructures have bad quality in design or construction such as irrigation without a gate to control water flow, generator which placed in the room without any exhaust pipe makes the room full of smoke, unsupported electricity cable which may dangerous or even the using of materials over than standard that caused higher cost. Several factors which cause these problems are lack of technical knowledge of village technical cadre or even project facilitators, uncompleted field survey, limited of the existing materials, and lack of monitoring during the implementation process.

The objective of this manual book is to assist people who involve in building small scale infrastructure at village level, such as technical facilitator, technical cadre and villagers. So they will understand the minimum quality standard of infrastructure that influences the process of planning, implementation and maintenance. Besides, this book could be used as technical training manual.

The content of this book is easy to understand since it consists of many pictures that show the good and the bad examples of infrastructures, complemented with simple explanation. All pictures were collected from KDP locations.

There in an expectation that this book may benefit not only in KDP but also other parties, such as NGOs and even community who do not have engineering background. In order to serve its purpose, critics, inputs and recommendation from the reader would be highly appreciated for better revision in the future.

Finally, we would like to thank to all parties who gave assistance in preparing this book. We wish that this book could give a benefit for better infrastructures development in the community-based development projects.

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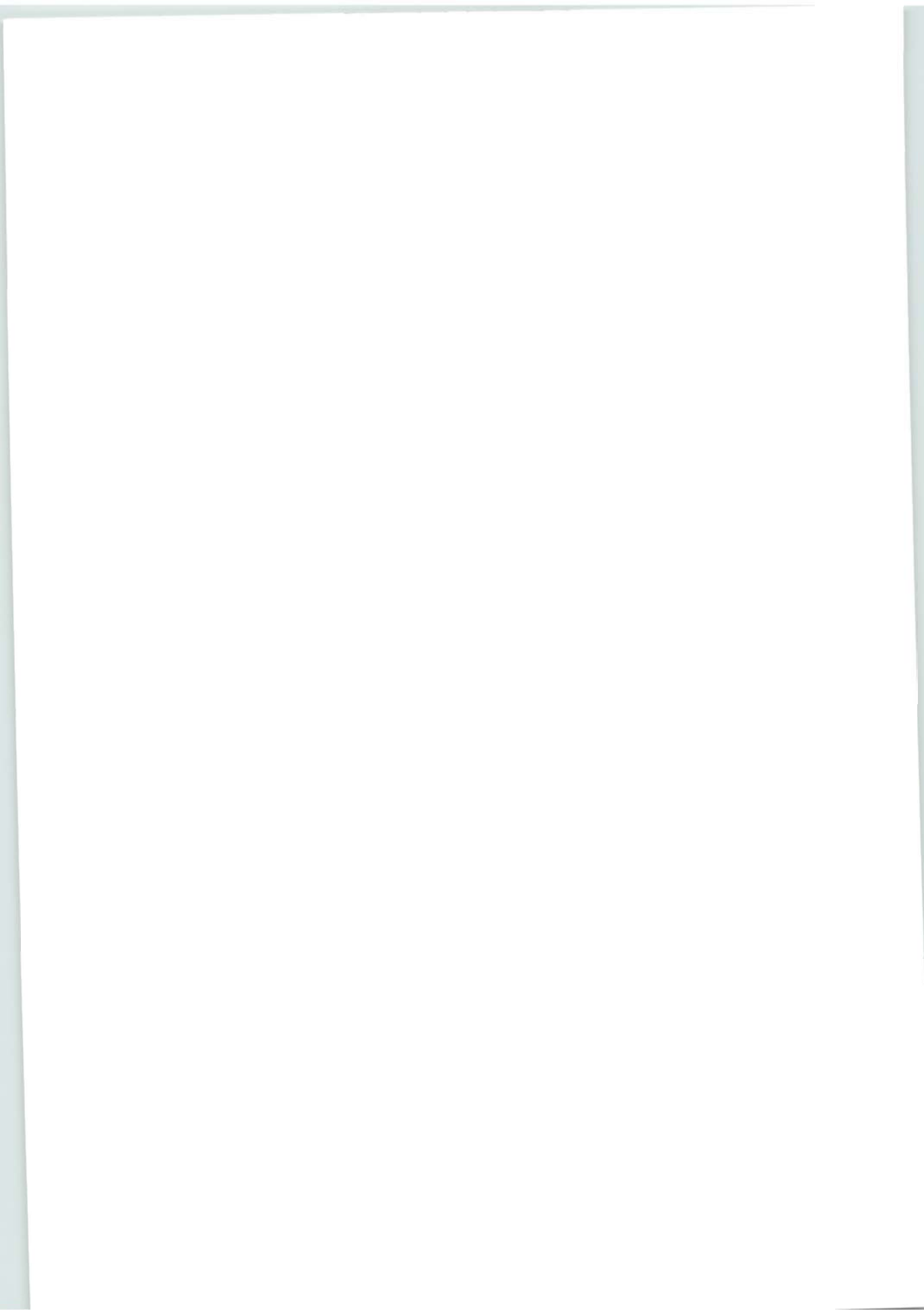
## ACKNOWLEDGMENTS

All photographs and text were prepared by Ekart Hartmann and Heinz Unger based on the supervision missions conducted in several KDP locations; West Sumatra, South Sumatra, West Java, Central Java, South Sulawesi, South East Sulawesi, Bali and East Nusa Tenggara (NTT).

Octaviera Herawati oversaw the production of these texts from field survey to publication and provided Indonesian translation, with overall guidance from Victor Bottini. Sentot Satria provided invaluable assistance in selecting field locations.

Scott Guggenheim, Victor Bottini, Enurlaela Hasanah, Sentot Satria, Richard Gnagey and Suroso Yoso Oetomo also contributed comments and input. Field support was also provided by the National Management Consultant (NMC) in Jakarta and the Regional Management Unit (RMU) in the provinces listed above. Field staff facilitated visits to KDP sites.

Special thanks to Scott Guggenheim for his ongoing support.





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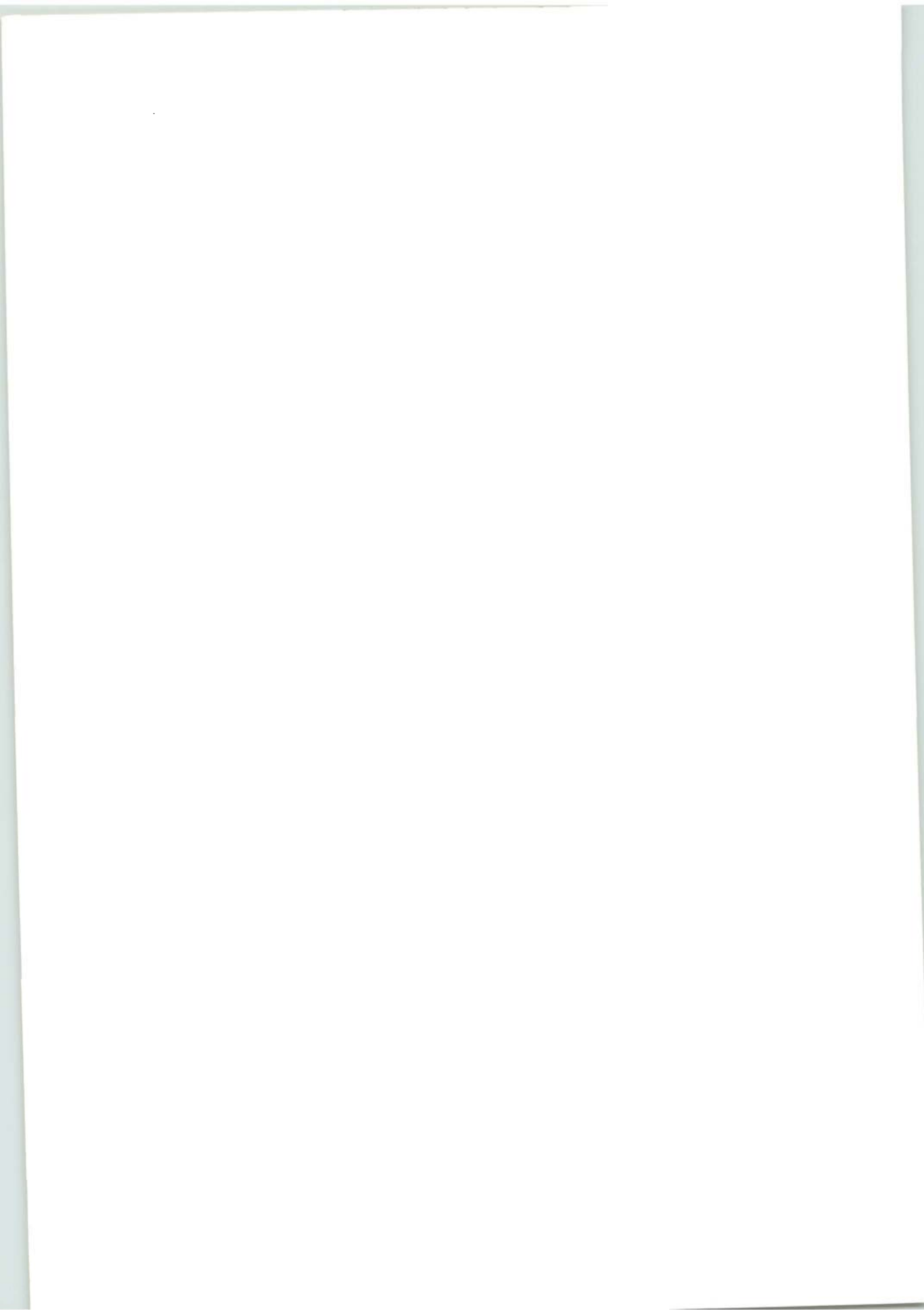
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## SCHOOL

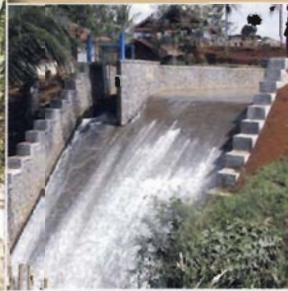
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# IRRIGATION







No protection against erosion, therefore the bank is washed out.

## How can I do it better ?

### **GENERAL**

- First fill in the bank and then place large stones on the compacted slope (especially at the toe), if the slope is steeper than 1:1.
- Make sure that the bank material is well compacted.

### **WHY ?**

- Do not underestimate the force of running water.
- Especially in curved canals, the outside banks must be protected against erosion (there is more water energy).
- Protection can be large stones (riprap), masonry, concrete, depending on the available materials.



Vegetation growth can block the flow of water

### How can I do it better ?

#### GENERAL

- Cut back and remove vegetation growth periodically.

#### WHY ?

- Plants like water and will grow right inside the canal and on the walls.
- Heavy plant growth can block the canal completely.
- Roots of the plants can damage and eventually destroy the masonry.



Bank protection with masonry

Protection against erosion

### Why is it better ?

#### **GENERAL - Canal**

- Masonry walls prevent erosion of the adjacent slope which could slip into the canal and block the flow of water.

#### **Alternative:**

- Instead of masonry, stone rip rap could be used, but on a sloped bank.
- Earth canal with natural slope, but it needs more space.



Setback of the natural slope

### Why is it better ?

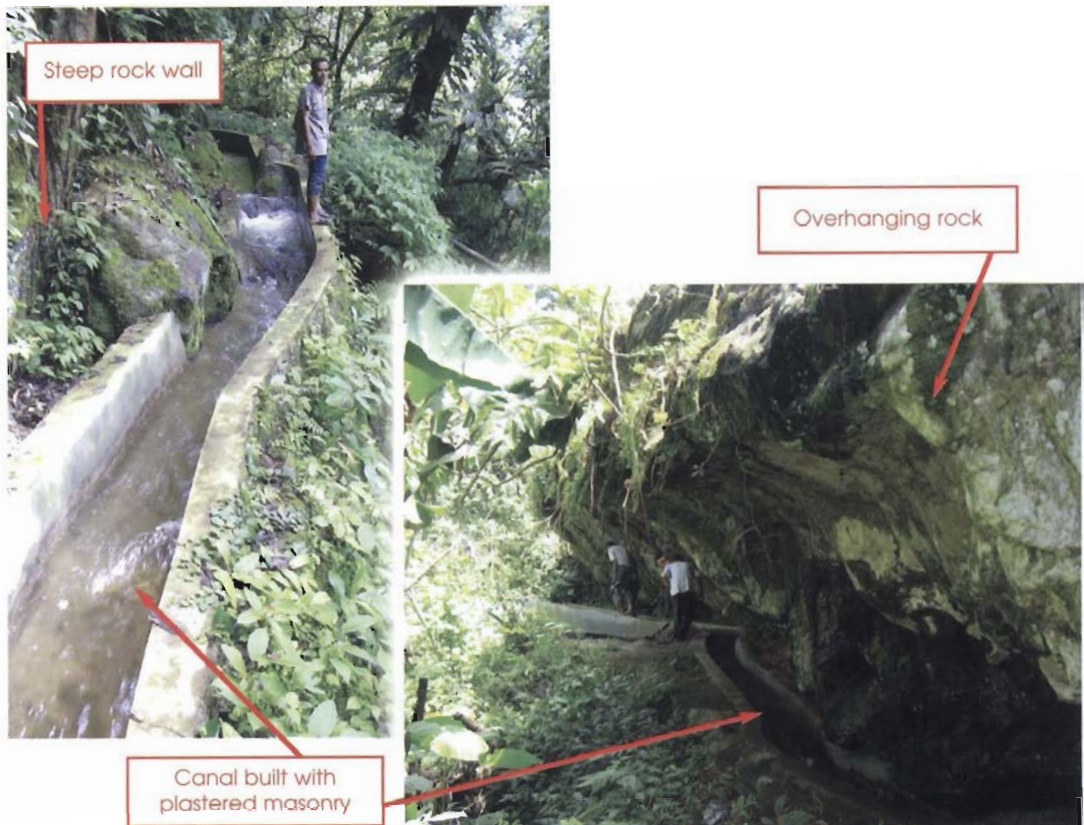
#### **GENERAL - Canal**

- The excavated slope is set back from the edge of the canal to prevent erosion material from blocking the canal.

#### **Alternative:**

- Higher walls for the canal to hold back the excavated slope, but this would be more costly.





Canal in a remote area

### Why is it better ?

#### **GENERAL - Canal**

- The existing rock wall and slope defines the alignment of the canal.
- Construction work in this remote area was very difficult.
- Regular maintenance must keep the canal clean of leaves and debris.

#### **Alternative:**

- No, because there is no other choice when the slope of the canal should not exceed 5%.

## Design - Construction - O & M



Canal bank and bed protection

### Why is it better ?

#### **GENERAL - Canal**

- The bank protection with masonry regards the load on the road too.
- Bank protection with bamboo is adequate along rice fields, because there are no traffic loads.
- Vertical walls save valuable agricultural land.
- The drop structure protects the bed of the canal.

#### **Alternative:**

- Protection can be also large stones (riprap), depending on the available materials.
- Earth canal with natural slope - needs more space.



Canal bank protections with bamboo

### Why is it better ?

#### **GENERAL - Canal**

- A commonly used traditional structure.
- The costs for bank protection with bamboo are low and it is adequate along rice fields, because the loads are low.
- Vertical bank protection saves valuable agricultural land.

#### **Alternative:**

- Earth canal with natural slopes would be cheaper, but needs more space.



Protection of canal bed with large (angular) rocks  
Directly downstream from the concrete drop structure

### Why is it better ?

#### **GENERAL - Canal**

- The permanent drop of water can erode the bed (invert) of the canal
- The force of water is high, even if the drop is low

#### **Alternative:**

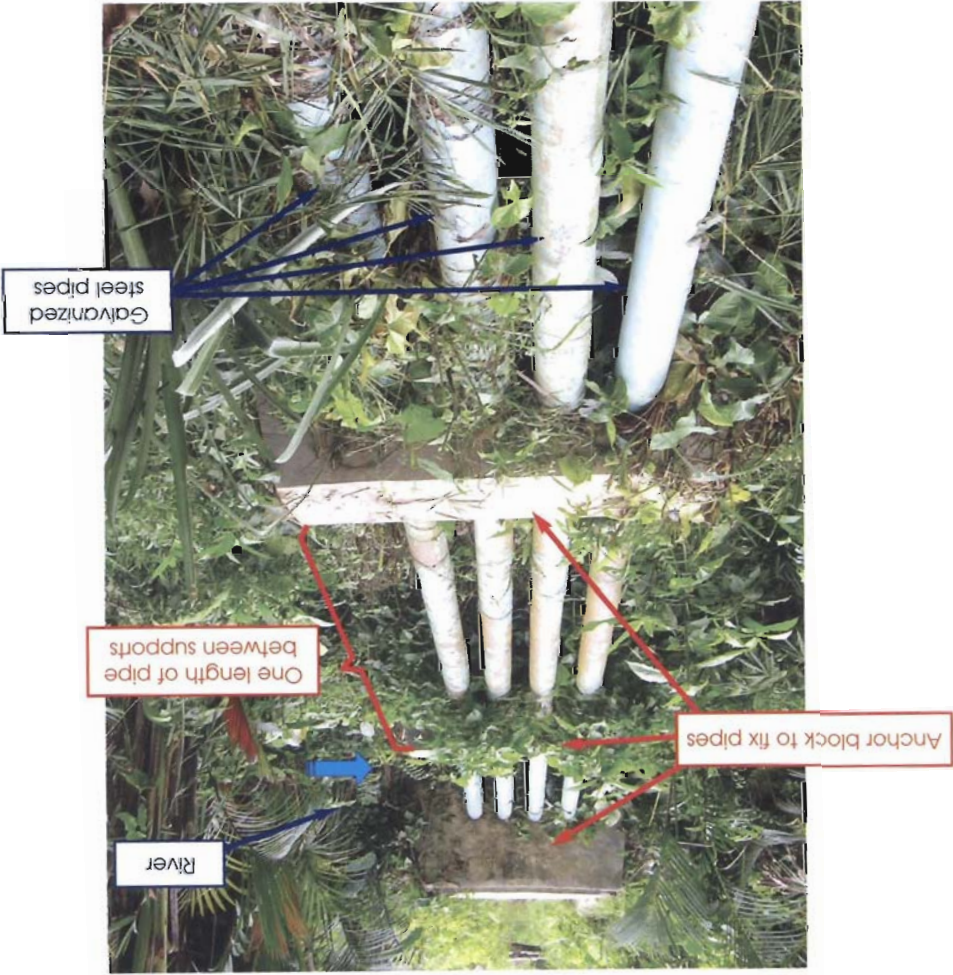
- No

**Note:** This type of construction could also be used for water supply

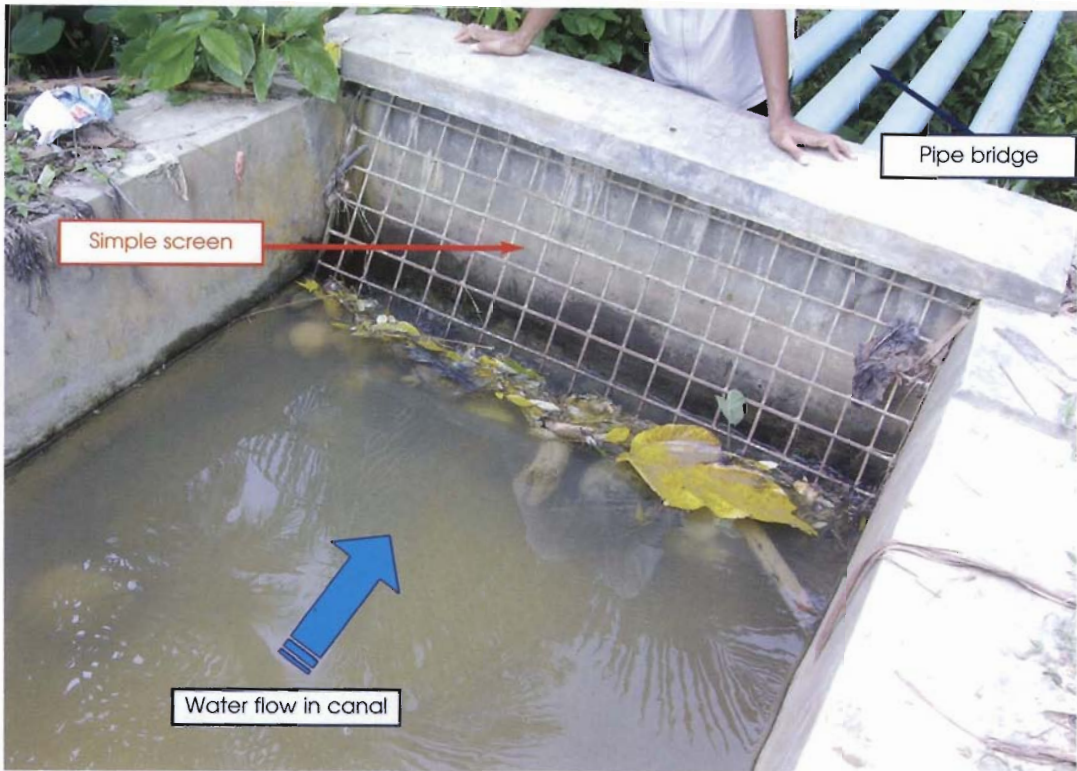
- Alternative:**
- An open channel canal bridge of concrete, wood or steel
  - Steel pipes are strong and stiff and can span far
  - A simple solution for a river crossing even if the steel pipes are costly
  - (but it still costs less than a concrete structure or pipe bridge)
  - Construction time is much shorter
  - Fix every length of a pipe with a concrete support / anchor block
- GENERAL - Canal "Bridge"**

### Why is it better ?

Irrigation canal crossing a river, using galvanized steel pipes



Design - Construction - O & M



Inlet structure to a pipe river crossing with a simple screen

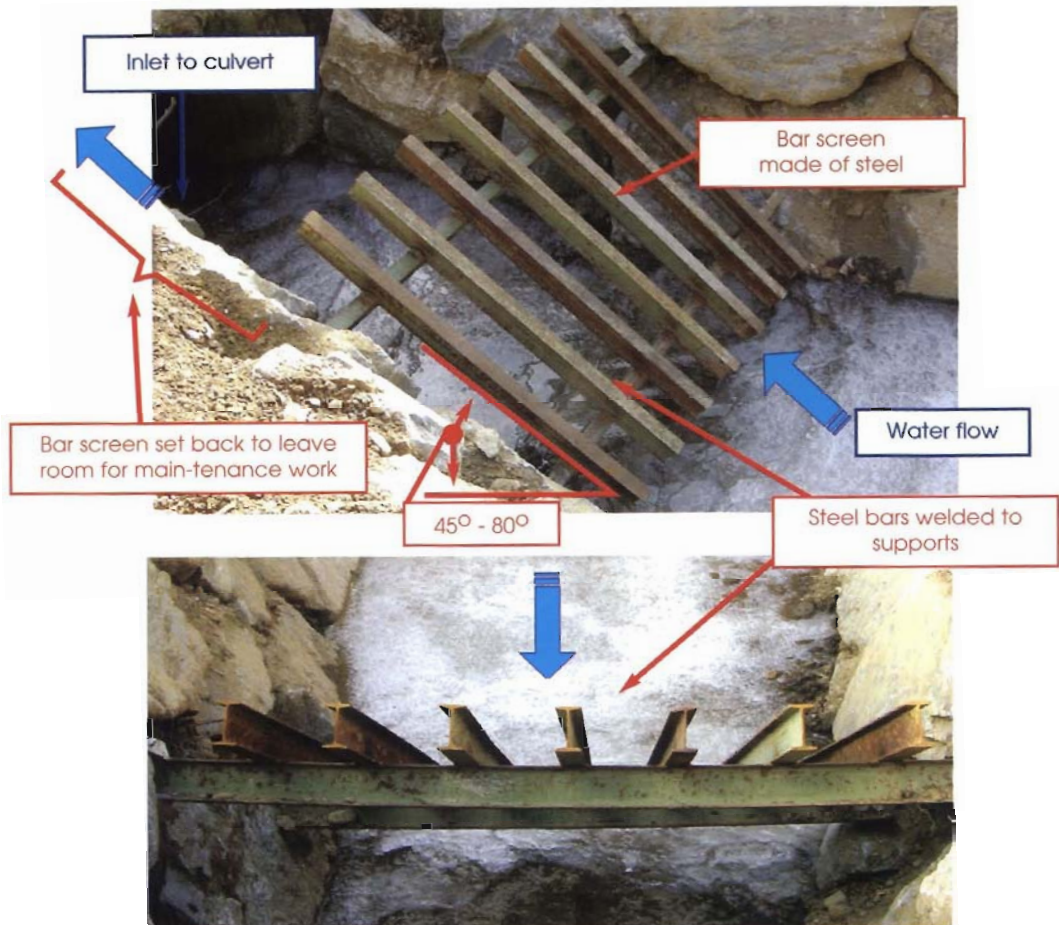
### Why is it better ?

#### **GENERAL - Bar Screen**

- A bar screen is essential in front of any inlet structure to prevent large objects and debris from being drawn into the pipeline and blocking it.
- A screen should consist of vertical (about 20 mm diam.) bars only.
- Horizontal bars may actually cause the inlet to get blocked.
- The screen has to be fixed to the canal wall and bottom.

#### **Alternative:**

- No, because every inlet structure should be provided with a bar screen with vertical bars.



Inlet to a pipe culvert with a heavy-duty bar screen

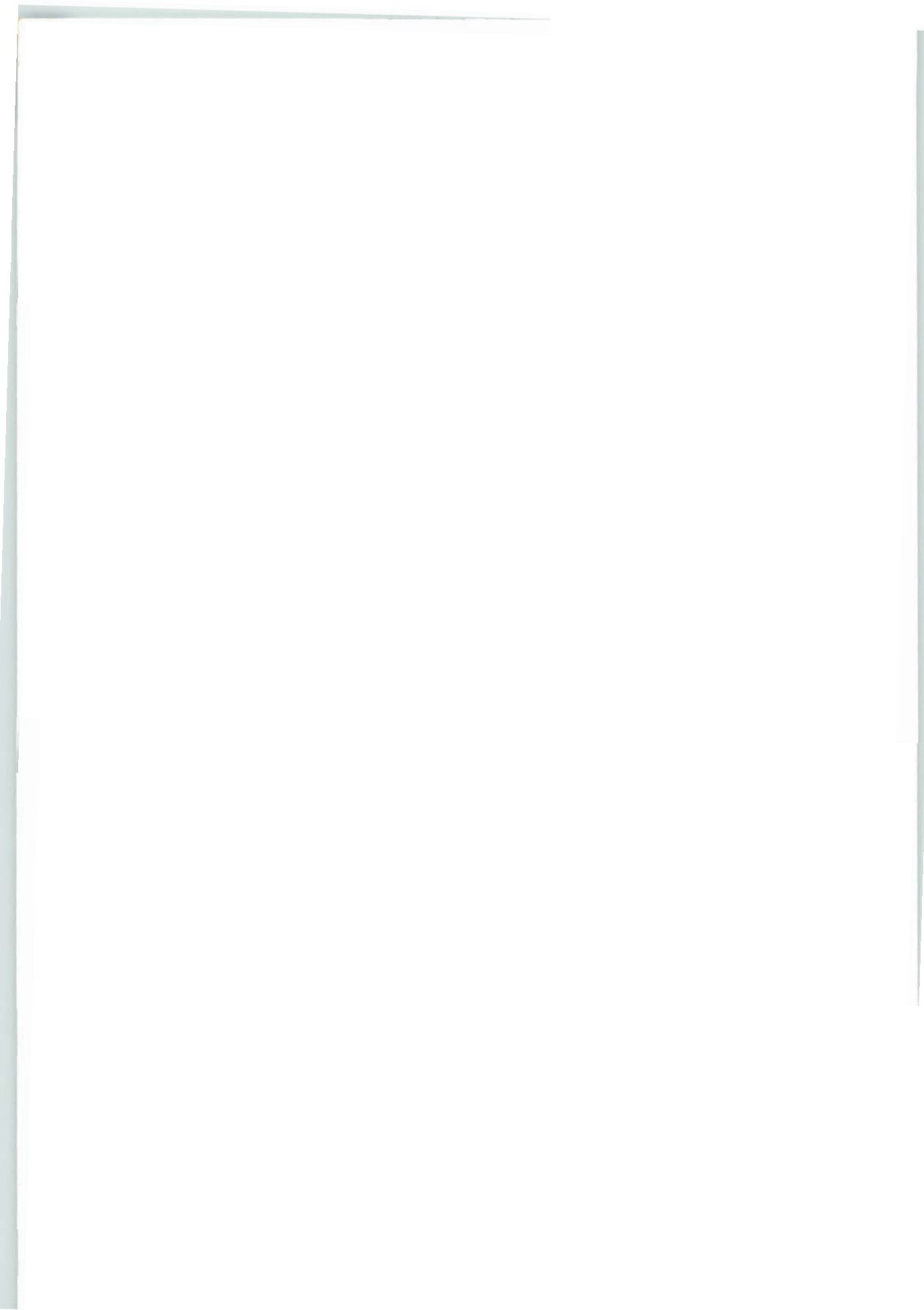
### Why is it better ?

#### **GENERAL - Screen**

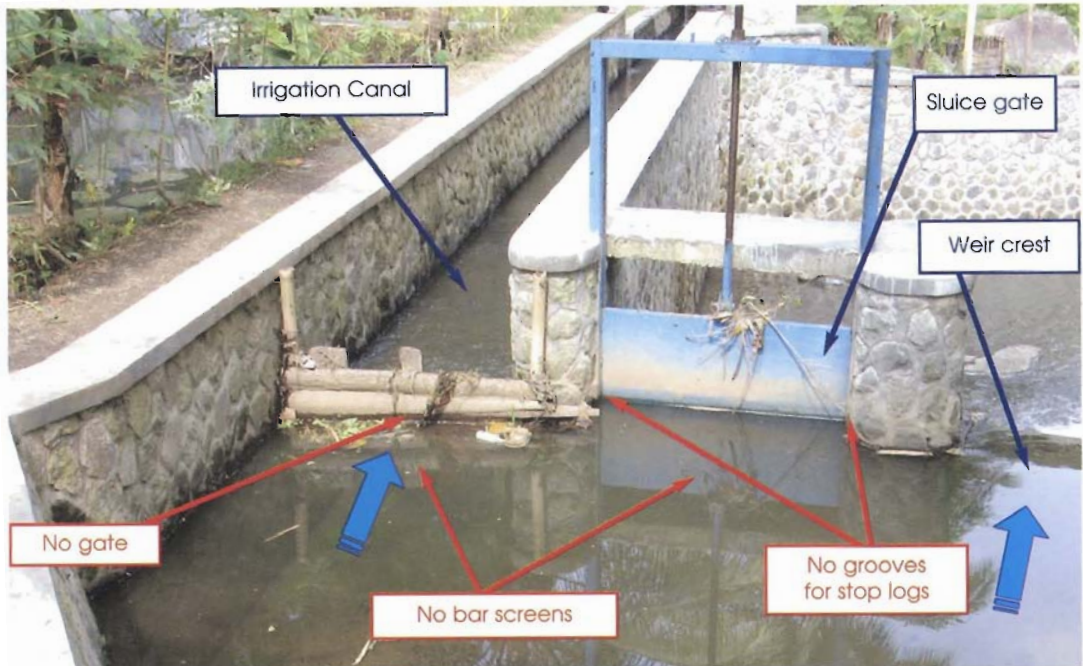
- A bar screen is essential upstream of any inlet to a pipe or canal.
- The bar screen has to be fixed to the canal walls.
- The angle between the bottom of the canal and the screen shall be between 45° to 80°.
- Set back the bar screen from the inlet to leave room for maintenance work.

#### **Alternative:**

- No, because every inlet structure should be provided with a bar screen.







There is no gate for the irrigation canal

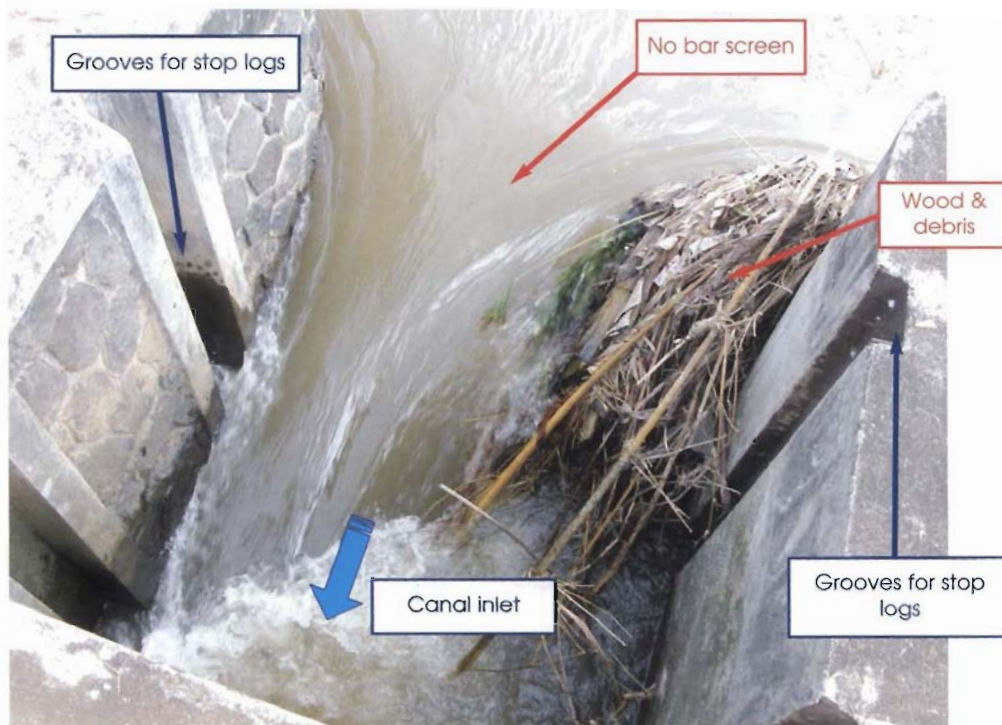
## How can I do it better ?

### *GENERAL - Canal Inlet*

- A gate must be installed at the inlet to the canal.
- Grooves for stop logs must be provided in front of the gates.
- Install a bar screen with vertical steel rods of about 20 mm diam. with an average clear distance of approx. 10cm.

## WHY ?

- Gate is essential to control the flow of water into irrigation canal.
- For maintenance or repair work at the gate, the stop logs are put into the grooves to hold the water back.
- The bar screen avoids that the channel will be jammed and blocked by wood or leaves.
- A bar screen is easier to clean from debris than a blocked canal.



There is no bar screen at the canal inlet

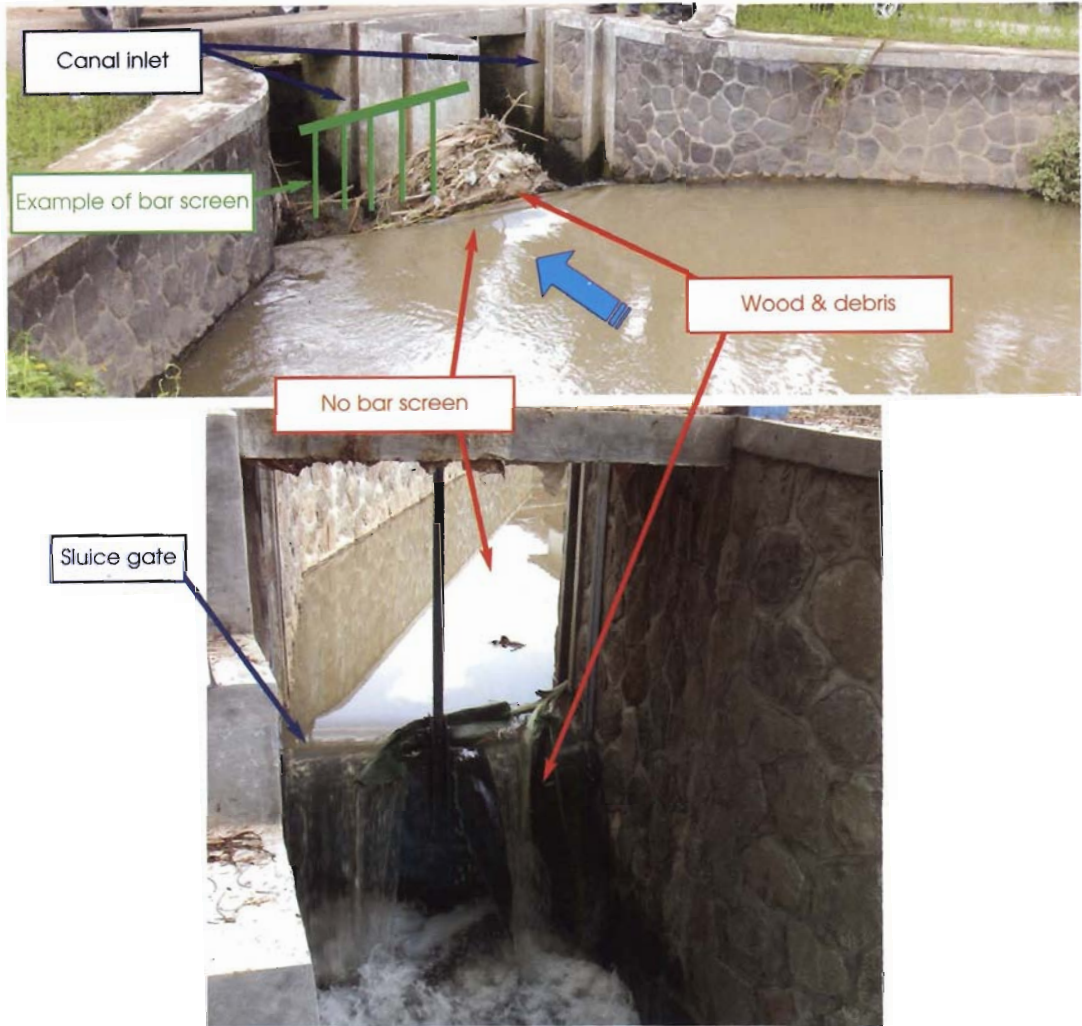
### How can I do it better ?

#### **GENERAL - Canal Inlet**

- Install a bar screen with vertical steel rods of about 20 mm diam. with an average clear distance of approx. 10cm.

#### **WHY ?**

- The bar screen prevents the canal from being blocked.
- A bar screen is easier to clean from wood and debris than a blocked channel.



There is no bar screen at the canal inlet

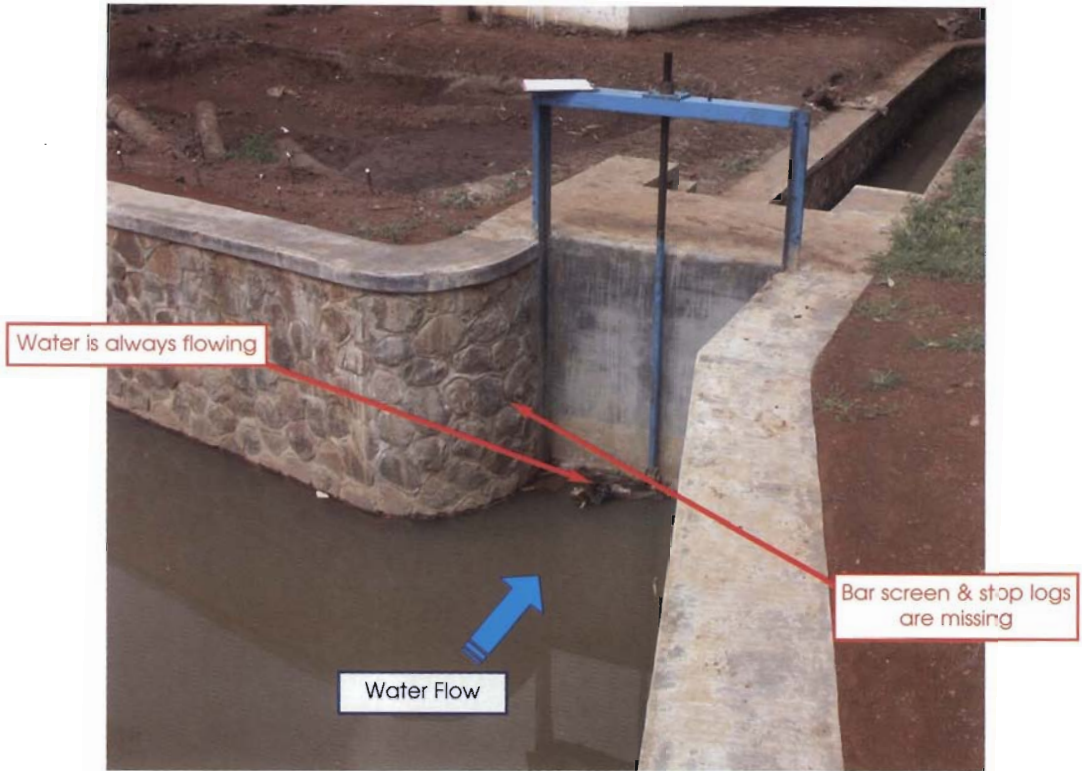
### How can I do it better ?

#### **GENERAL - Canal Inlet**

- Install a bar screen with vertical steel rods of about 20 mm diam. with an average clear distance of approx. 10 cm.
- Bar screen must be installed in front of the stop log grooves.

#### **WHY ?**

- The bar screen prevents the canal from being jammed or blocked.
- A bar screen is easier to clean from wood & debris than a blocked canal.



Top of sluice gate is lower than the top edge of inlet into the canal (the concrete part) and water is always flowing. The gate cannot be closed tightly

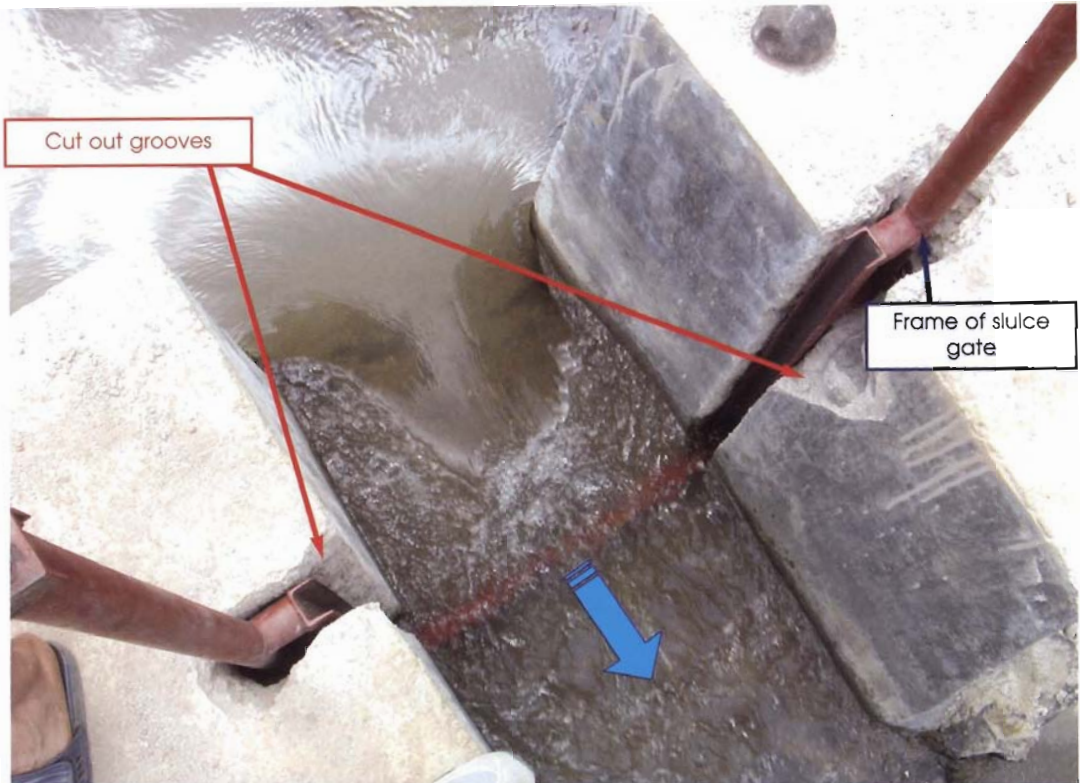
### How can I do it better ?

#### **GENERAL - Canal Inlet**

- Mount a steel section as threshold (sill) on the bottom of the canal to reduce the opening, or
- Raise the height of the gate by welding a steel section to the top of the gate. The steel section has to fit into the grooves of the gate.

### WHY ?

- The function of a gate is to shut off a canal inlet tightly.
- It is impossible to control the flow of water if the gate does not shut tightly.



Cutting out grooves in concrete wall shall be avoided

### How can I do it better ?

#### **GENERAL - Sluice Gate**

- Put steel base plates in the formwork. After placing concrete, weld the frame of the gate to the base plates. The canal has to be made wider to fit the outer dimension of gate frame, or
- Use formwork which allows the installation of the gate after the concrete work.

### WHY ?

- Every groove or hole cut into a concrete structure after the concrete work is completed, weakens the concrete structure.

## Design - Construction - O & M



General arrangement of an irrigation weir

### Why is it better ?

#### **GENERAL - Weir**

- An irrigation weir should include all the components shown above.

#### **Alternative:**

- No.



A long spillway of an irrigation weir

### Why is it better ?

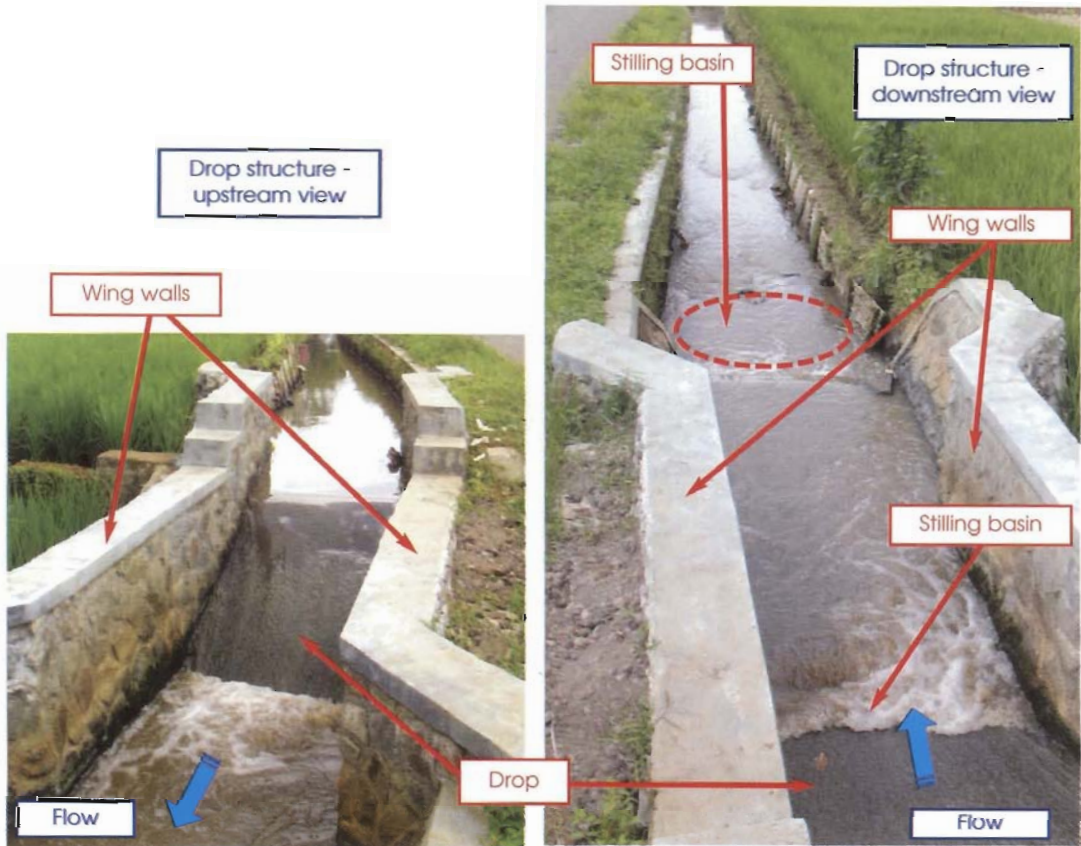
#### **GENERAL - Weir**

- A well built irrigation weir and spillway.
- Steps on the retaining wall ease the access for maintenance.

#### **Alternative:**

- No.

**Design - Construction - O & M**



Drop structure

**Why is it better ?**

**GENERAL - Drop Structure**

- The water flow can be controlled by a drop structure when the natural ground is too steep or the velocity of the water is too high.

**Alternative:**

- Steep canal section, but that will erode the bed of the canal.





Sand trap integrated in the weir structure

## Why is it better ?

### **GENERAL - Sand Trap**

- If the river carries a lot of sediment, a sand trap is recommended and should be integrated into the structure.
- The sand trap shown can be cleaned easily by closing the outlet to the irrigation canal. The water flushes the sand back to the river.
- The sand trap must be cleaned periodically (maintenance).

### **Alternative:**

- If there is no sand trap, the sand and sediment will settle in the irrigation canal, where it is much more difficult to remove.



Irrigation canal bridge over a small valley

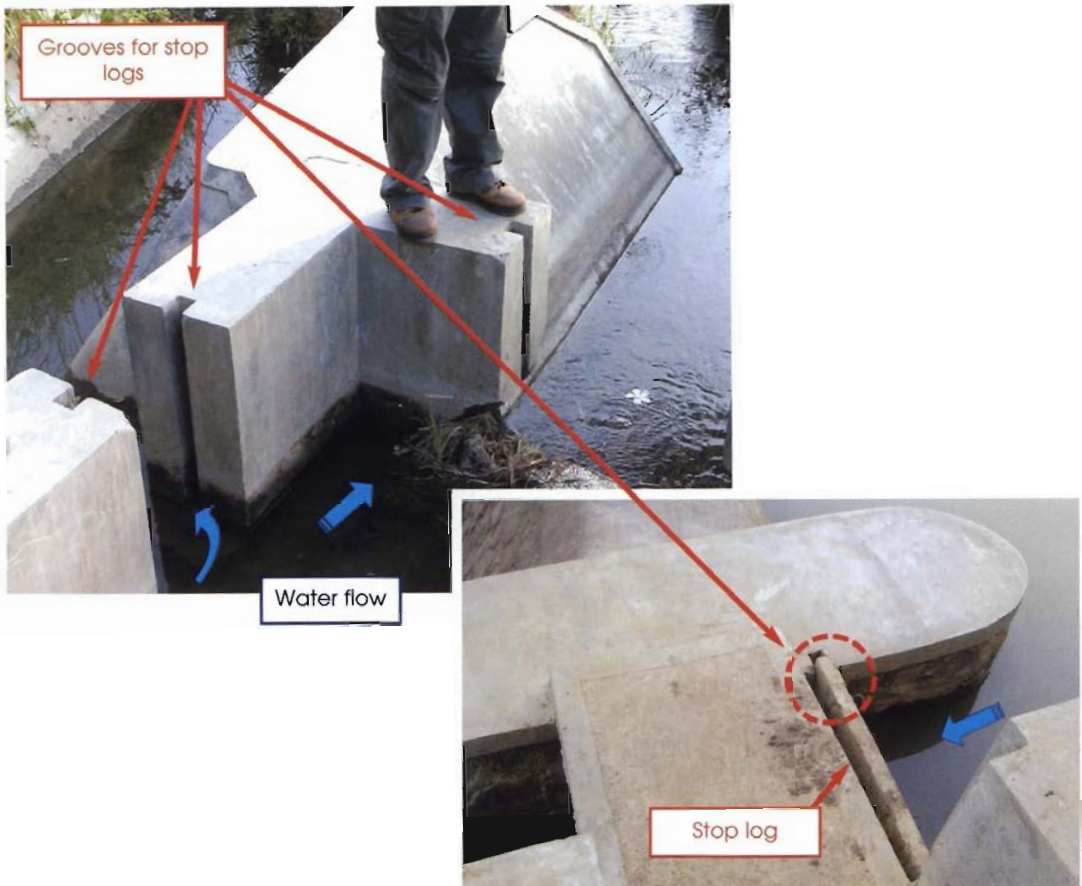
### Why is it better ?

#### **GENERAL - Canal Bridge**

- It is built more or less like a small footbridge.
- Cross struts are used to strengthen the structure.
- The walkway is good for maintenance access.

#### **Alternative:**

- A pipe bridge.



Control and distribution of water with stop logs

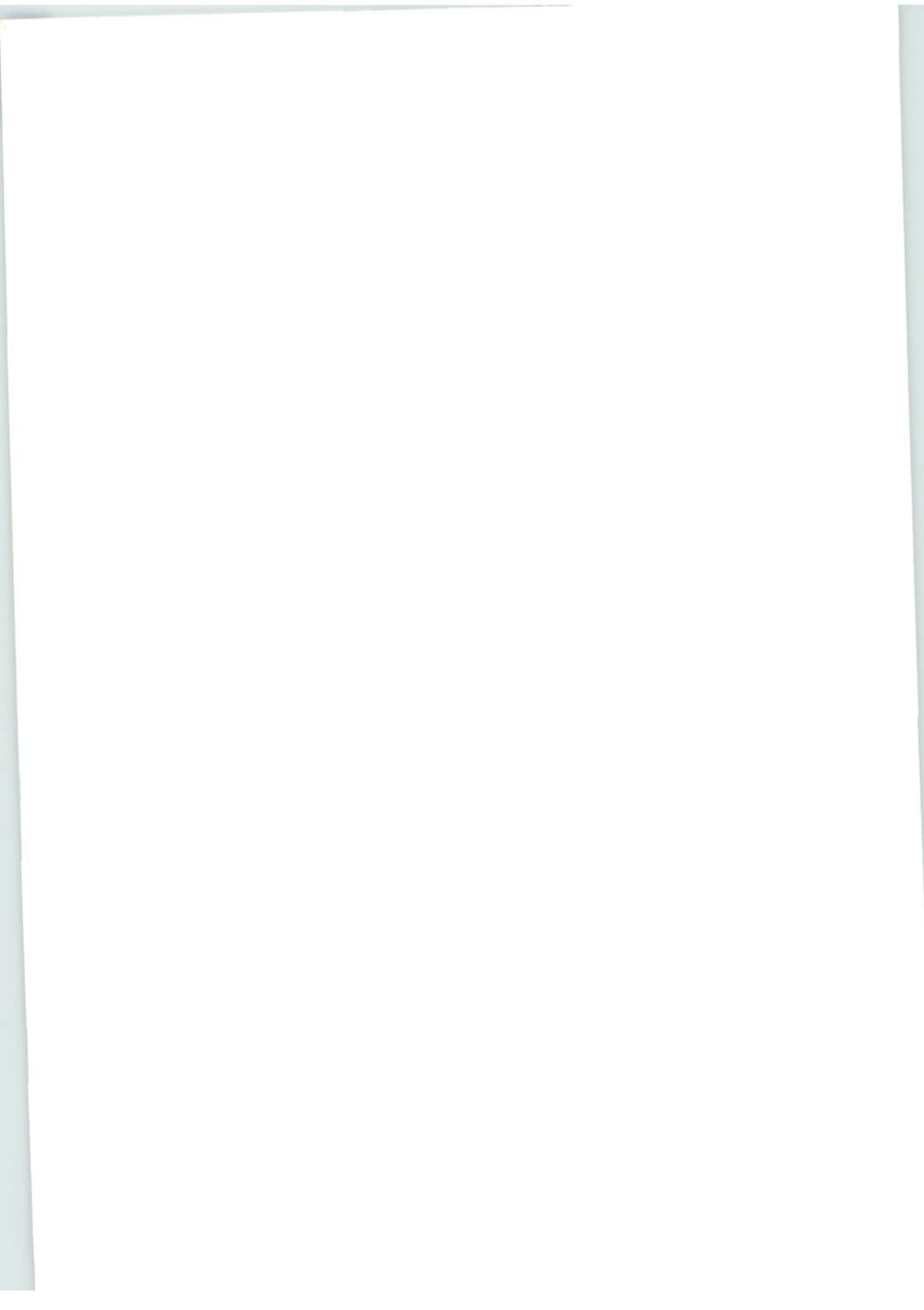
### Why is it better ?

#### **GENERAL - Diversion Structure Detail**

- Grooves for stop logs made with formwork.
- Stop logs are cheap and easy to handle.
- Stop logs can be of wood, iron or concrete.

#### **Alternative:**

- Sluice gate are more convenient, but also more expensive.



# ELECTRICITY SUPPLY





Unhealthy exhaust fumes fill the shed

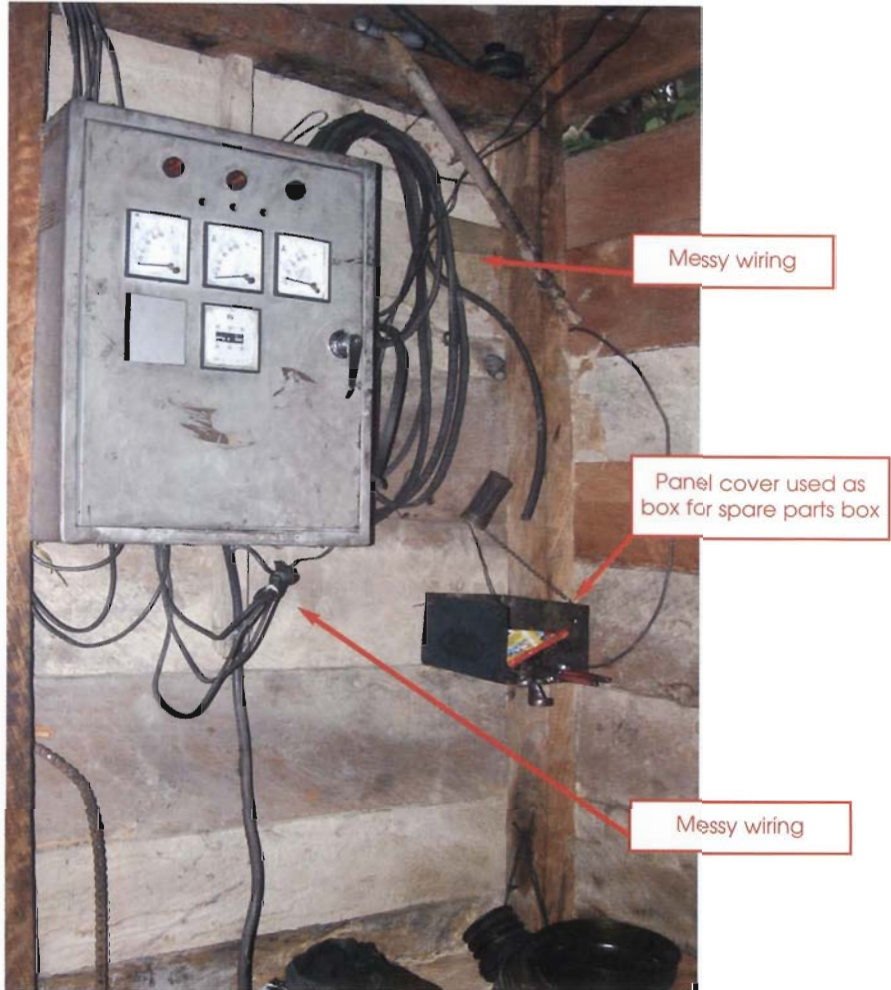
### How can I do it better ?

#### **GENSET - Installation**

- Extend the exhaust pipe through the wall of the shed.

### WHY ?

- The exhaust fumes in the shed are unhealthy for the operators.



Dangerous arrangement of electrical wires

### How can I do it better ?

#### **CABLING - Genset**

- Gather the wires and lay them in ducts or trays.
- Put the panel cover where it belongs and do not use it as box for spare parts.

### WHY ?

- Electricity is dangerous and can cause shock (death) or fire if the wires are not laid in the right way.



Well built shed

### Why is it better ?

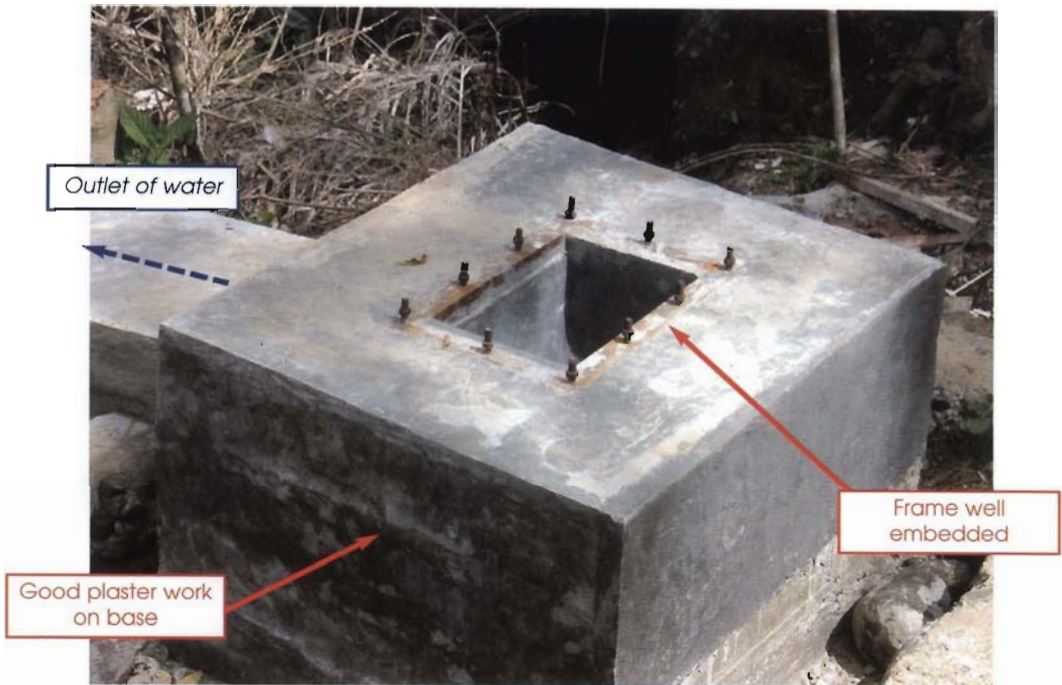
#### **GENSET - Shed**

- The public access to genset or pumps should be prevented by a lockable shed.

#### **Alternative:**

- Alternatives only for type and style of structure.





Well built base for a hydro turbine

### Why is it better ?

#### **GENSET - Turbine Base (Hydro)**

- Accurate setting of base plate and bolts is important for turbine (and pump) installations so that the equipment will fit and work properly.

#### **Alternative:**

- There is no alternative for accurate work.



Distribution box

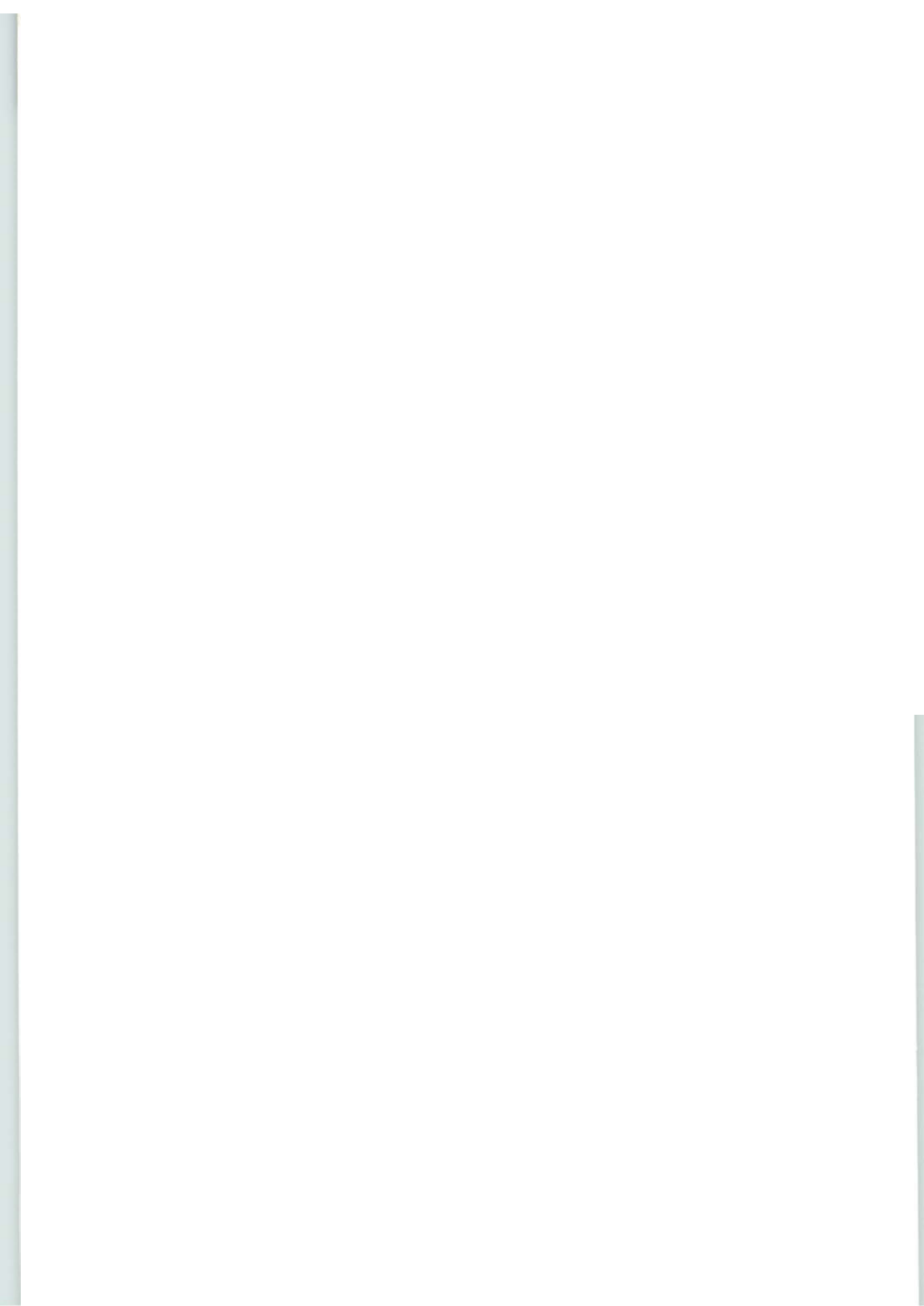
### Why is it better ?

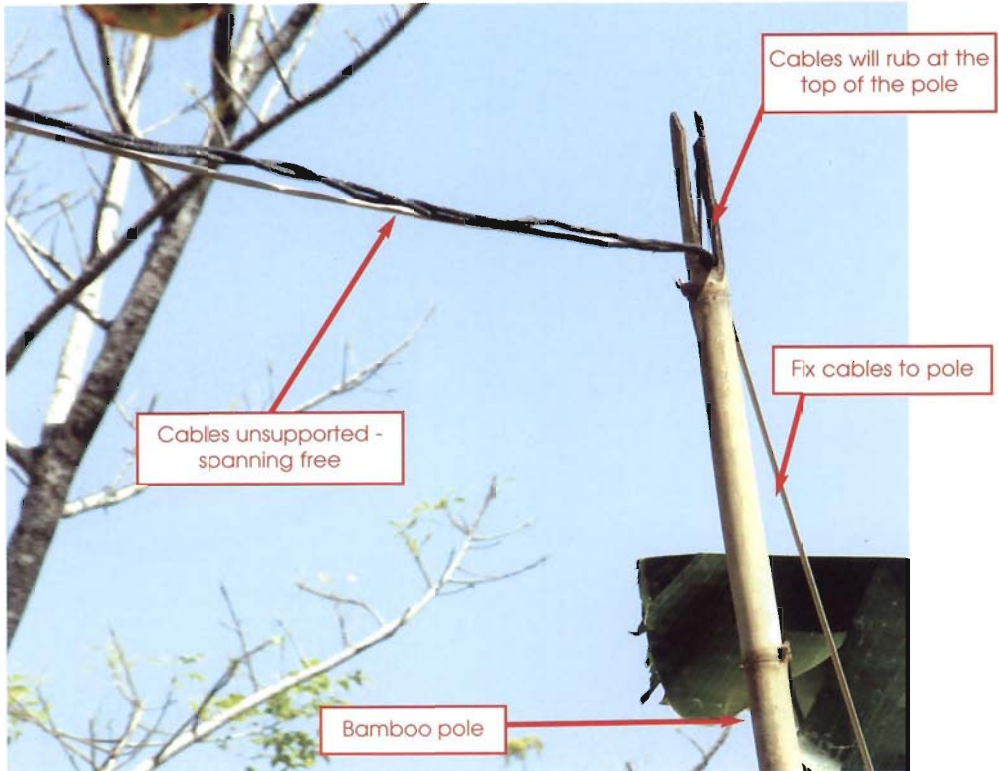
#### ***CABLING- Distribution Box***

- Tidy wiring eases maintenance and reduces the risk of accidents.

#### ***Alternative:***

- No.





Dangerous arrangement of electrical cables

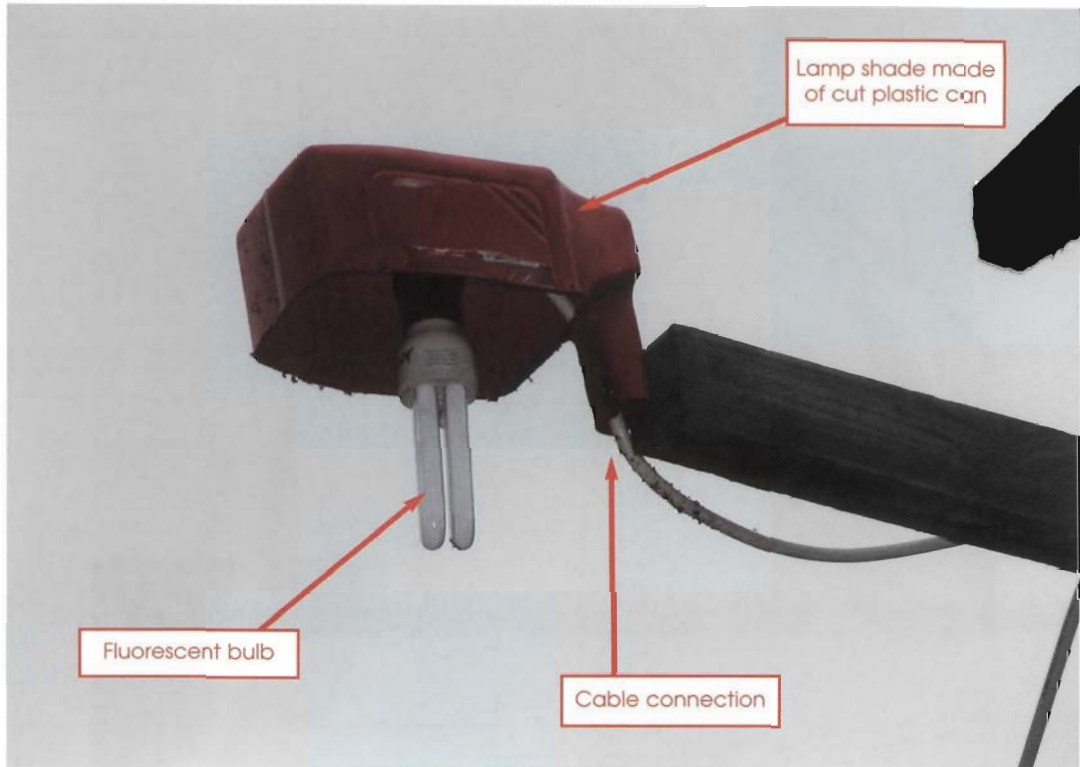
## How can I do it better ?

### **CABLING - Pole**

- Support the horizontal free-spanning cables (with steel wire or bamboo) and fasten cables to supports.
- Make a loop in the wires at the top of the pole to support their weight.
- Fix the wires to the side of the pole to prevent movement.

## WHY ?

- Rubbing cables can cause a short-circuit when insulation is worn through.
- Electrical cables are quite heavy and must be supported and fixed.
- Electricity is dangerous and can cause shock (death) if the wires are not installed in a safe manner (watch out for access by children !).



Street light

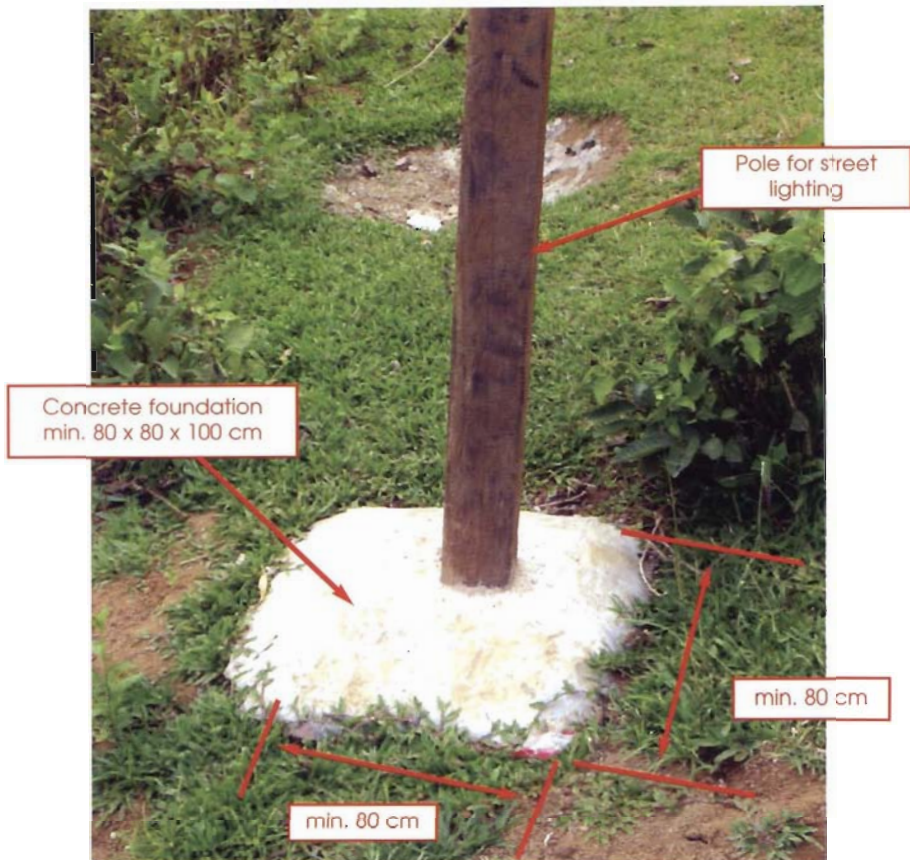
### Why is it better ?

#### ***CABLING - Street Lighting***

- Electrical connections must be protected against rain to prevent short circuits.
- Fluorescent bulbs save a lot of electricity.

#### ***Alternative:***

- Any shade which ensures protection of the electrical equipment.



Foundation for a street lighting pole

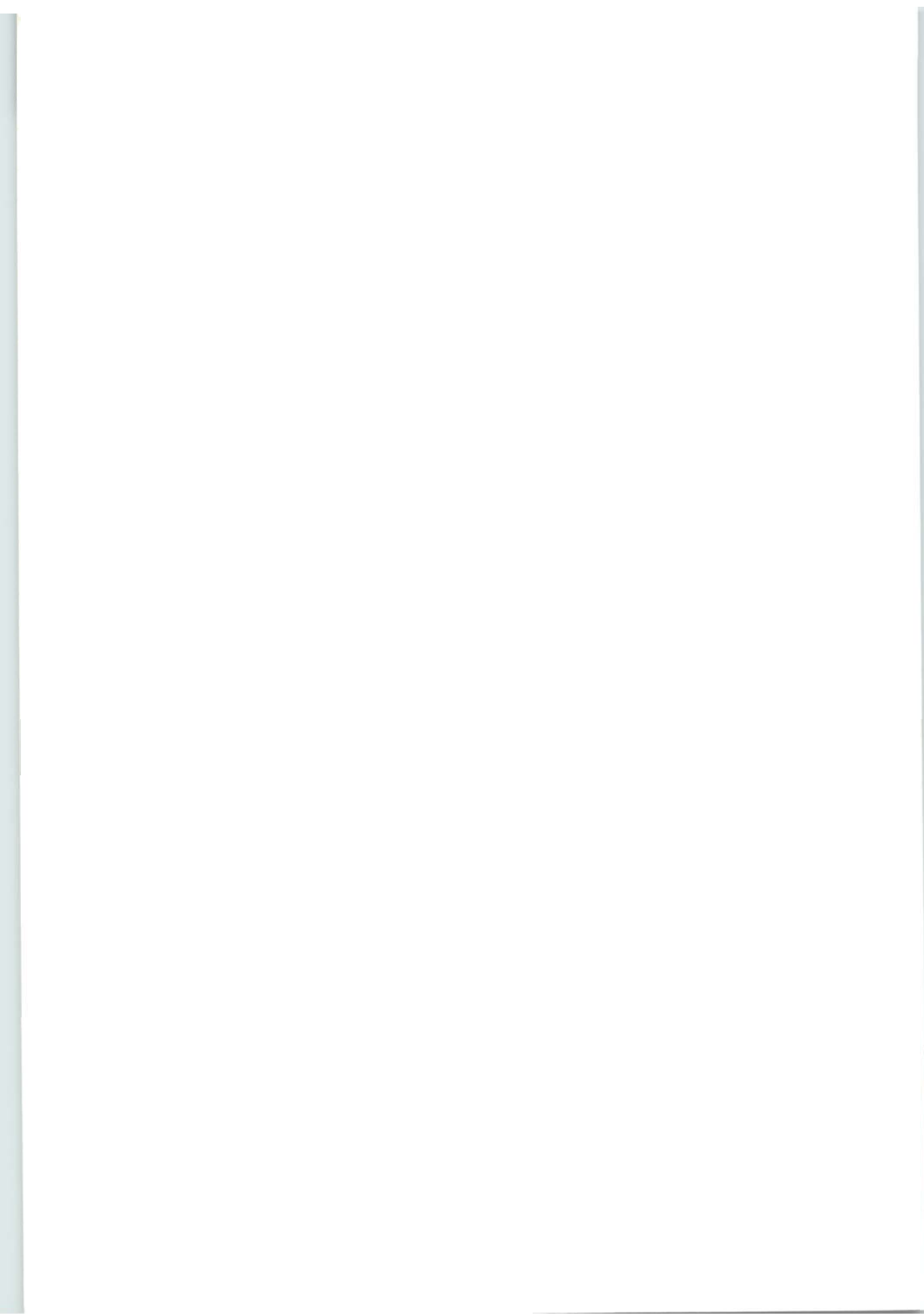
### Why is it better ?

#### **CABLING - Pole**

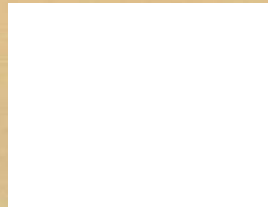
- A solid pole foundation is essential for safe lighting and power distribution.

#### **Alternative:**

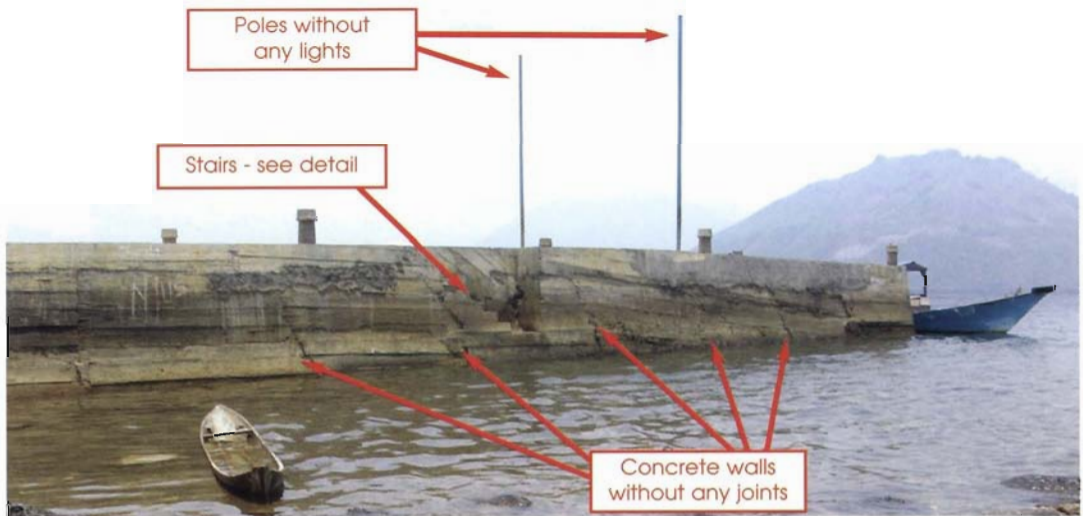
- Two steel I-beams set vertically in a concrete base with a wooden pole is fastened to the steel beam between (more expensive).



# PIER







The overall execution and appearance of this pier is not good

### How can I do it better ?

#### **STRUCTURE - Concrete Work**

- The concrete walls are poorly finished (use better formwork).
- No seals were used at the joints of the concrete wall segments.

### WHY ?

- The concrete wall segments must be joined together for structural stability and strength.



The concrete finish is unsatisfactory

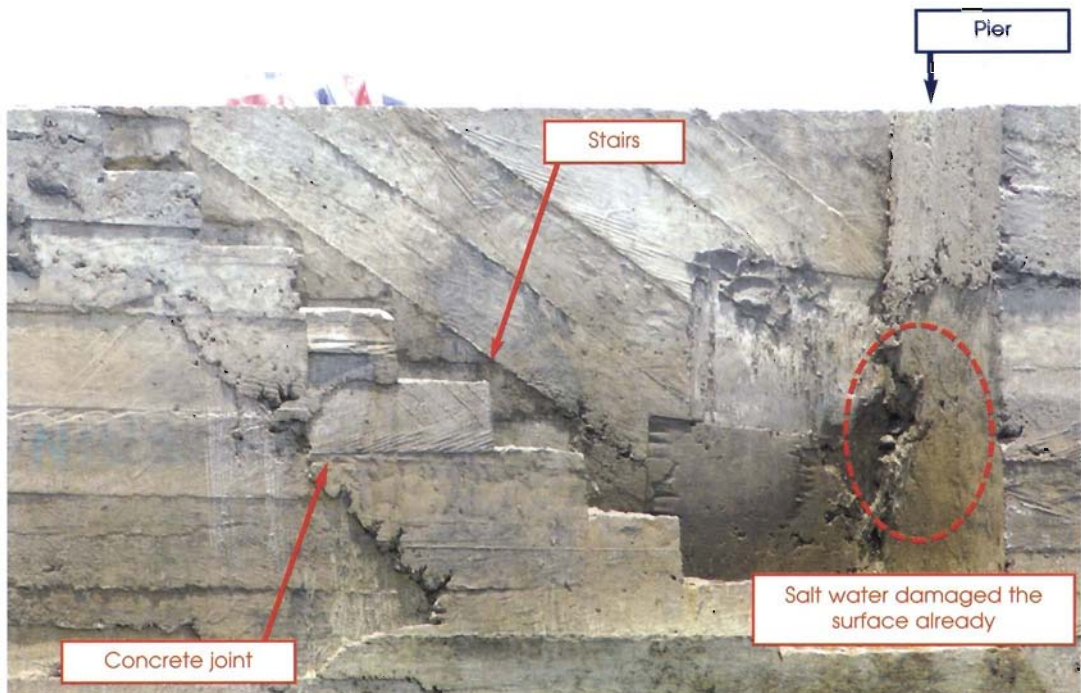
### How can I do it better ?

#### **STRUCTURE - Concrete Work**

- Take more care with the formwork and when placing the concrete.
- Plaster the wall if the surface looks like this.

### WHY ?

- There are no structural reasons, but the structure should have a good appearance - people should be proud of their work.



The concrete finish (formwork) are unsatisfactory

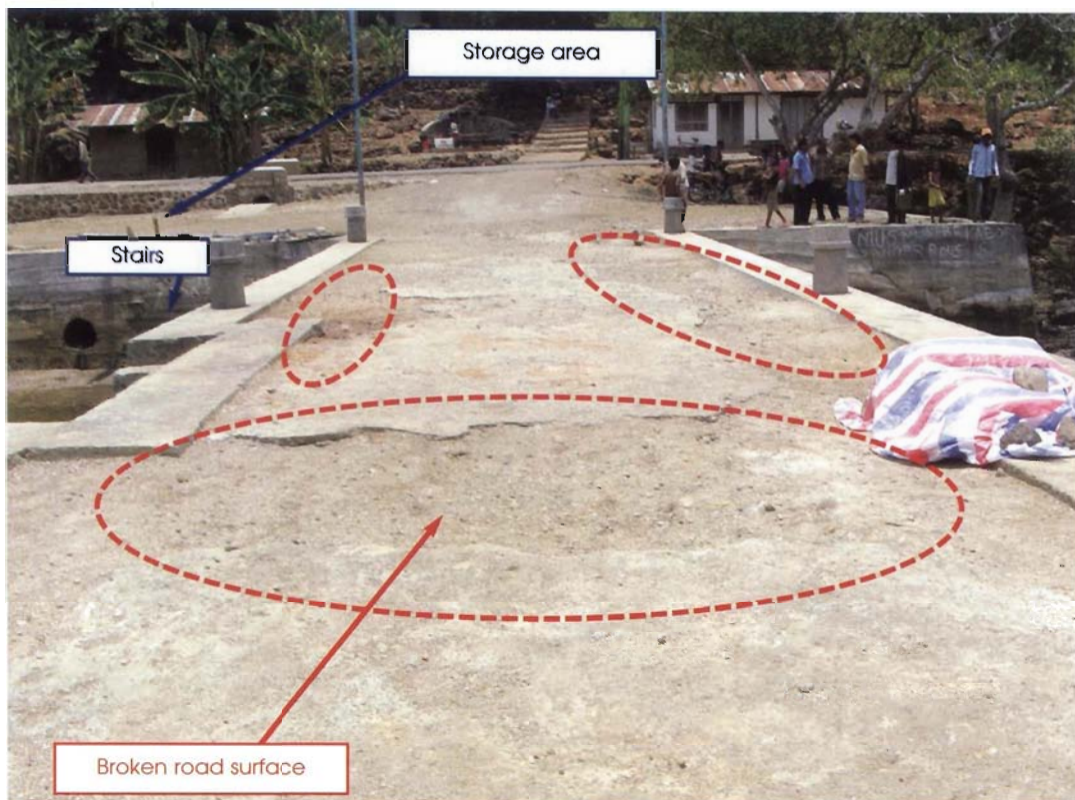
### How can I do it better ?

#### **STRUCTURE - Concrete Work**

- Take more care when erecting the formwork.
- Try to get a smooth surface finish by using good boards.
- Plaster the wall if the surface is poor.

### WHY ?

- Aggressive seawater will damage the structure → avoid poor finish and cuts and breaks in the concrete.



Water will seep into the pier structure where the road surface is damaged

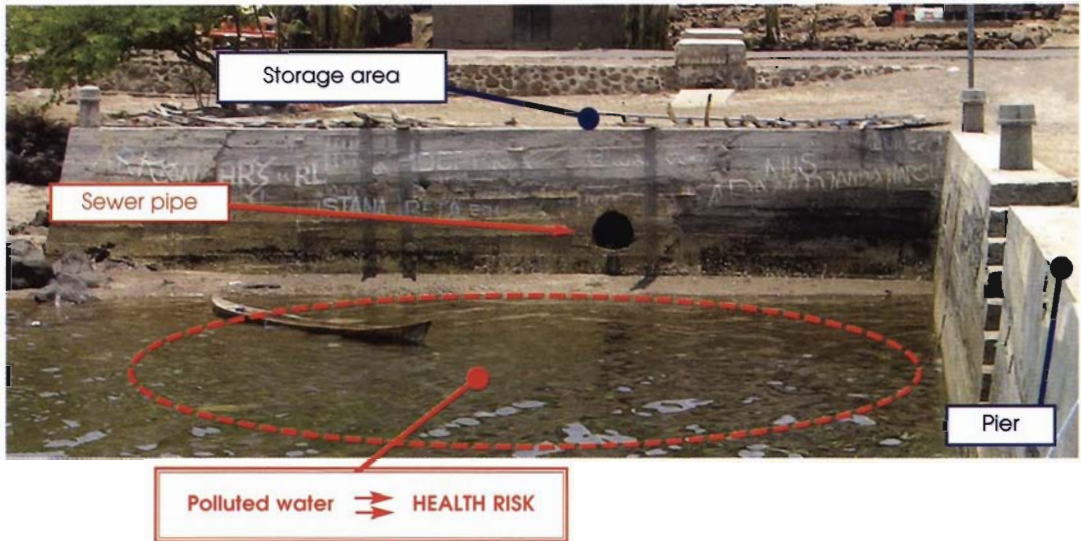
### How can I do it better ?

#### **STRUCTURE - Access Road**

- Seal the surface as soon as possible.

### WHY ?

- Seepage water cannot drain out if there are no weeping holes in the sea walls.
- The seeping water will compact the fill material and it will settle - damaging the loading area.



A sewer must not discharge in a public transport area

### How can I do it better ?

#### **STRUCTURE - Sewer**

- Move the outlet of the sewer to a different location where the currents and tides will dilute and flush away the effluent.

### WHY ?

- An open sewer outlet is a health risk for the people who use the pier.

**Design - Construction - O & M**



General arrangement of a pier seen from landside

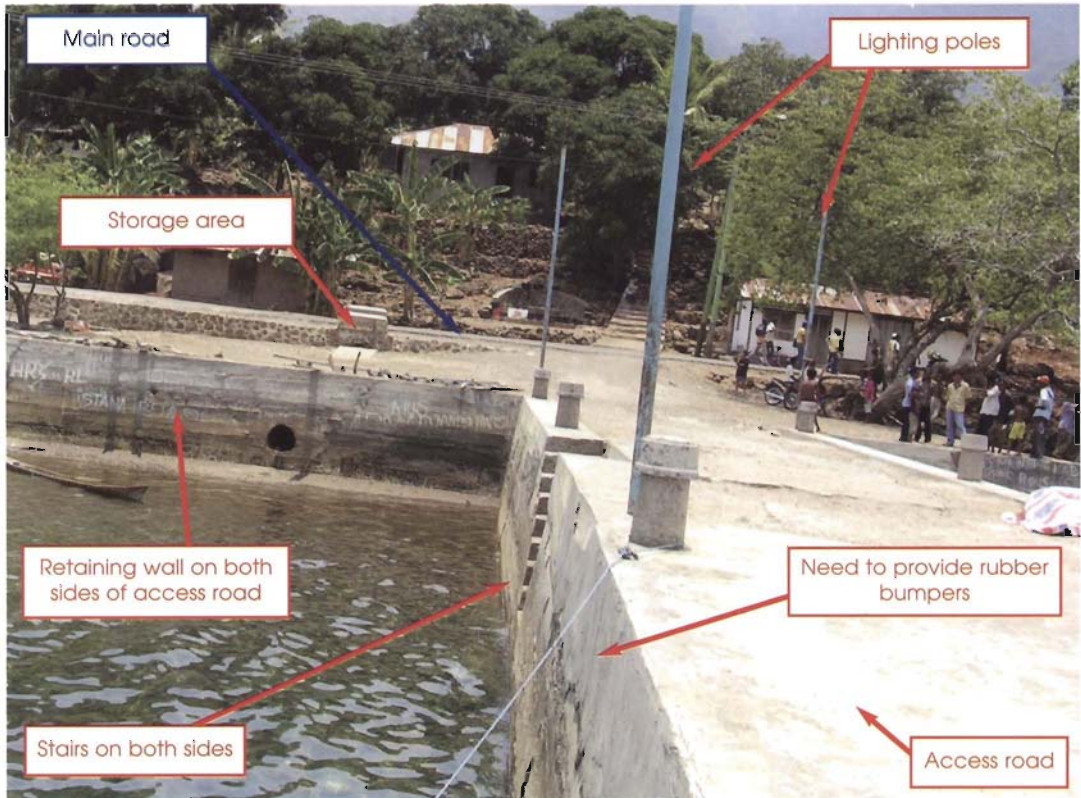
**Why is it better ?**

**STRUCTURE**

- A pier project has to consist of all the shown elements.

**Alternative:**

- No.



General arrangement of a pier seen from landing

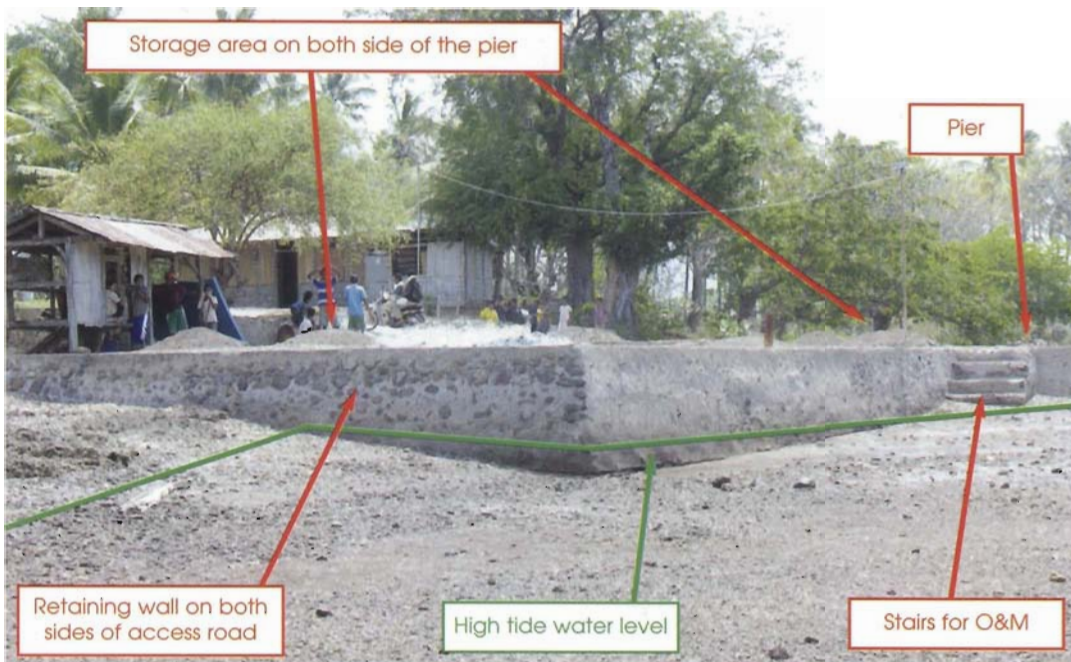
### Why is it better ?

#### **STRUCTURE**

- A pier project has to consist of all the shown elements.

#### **Alternative:**

- No.



Storage area of a pier

### Why is it better ?

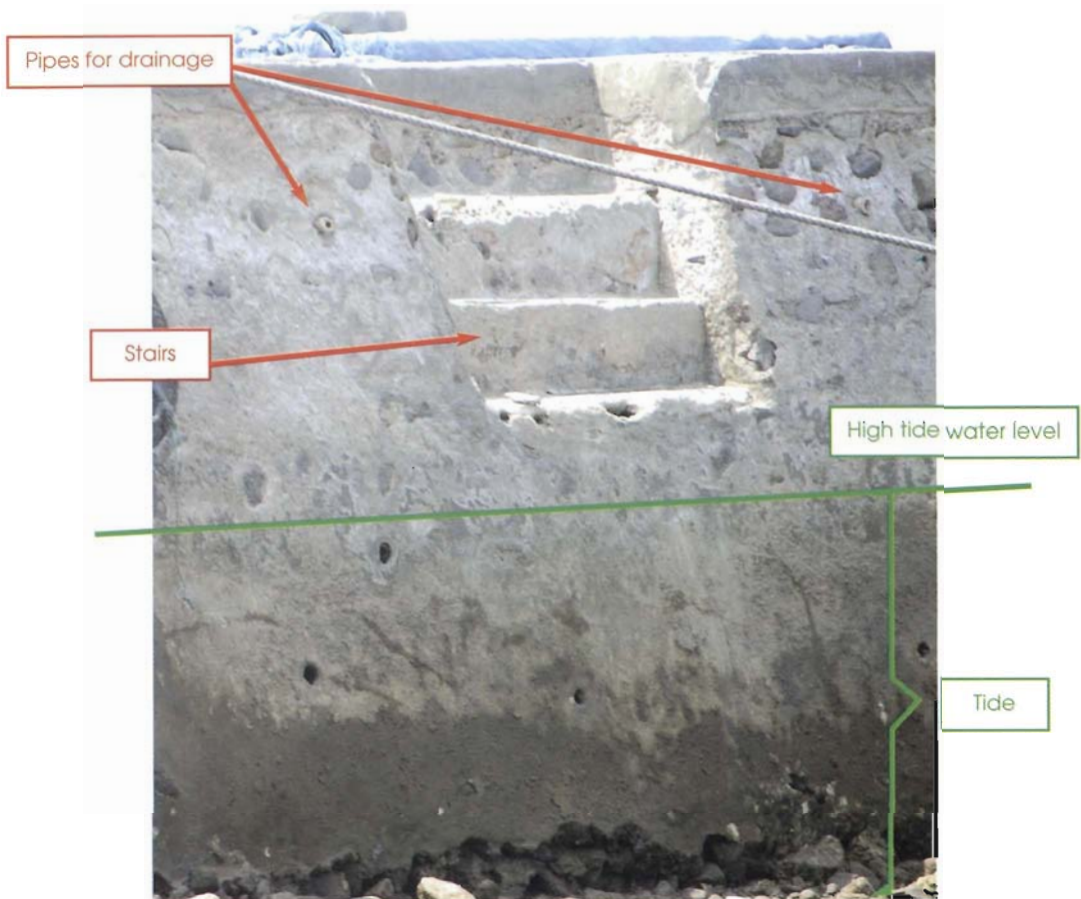
#### **STRUCTURE - Storage Area**

- A large storage area is necessary to store the goods before loading the ships and vice versa.

#### **Alternative:**

- No.





Stairs are only necessary at high tide

### Why is it better ?

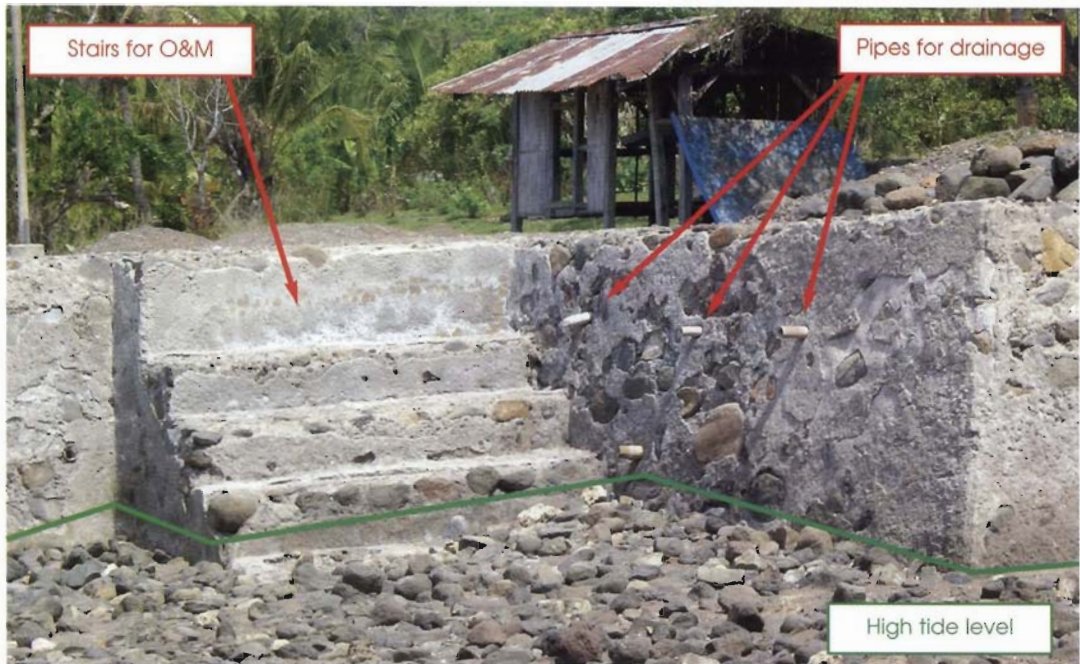
#### **STRUCTURE - Stairs**

- The passenger can leave the boat easier

#### **Alternative:**

- To supply the pier with a moveable footbridge which follows the water level of the tide

## Design - Construction - O & M



Stairs for O&M works

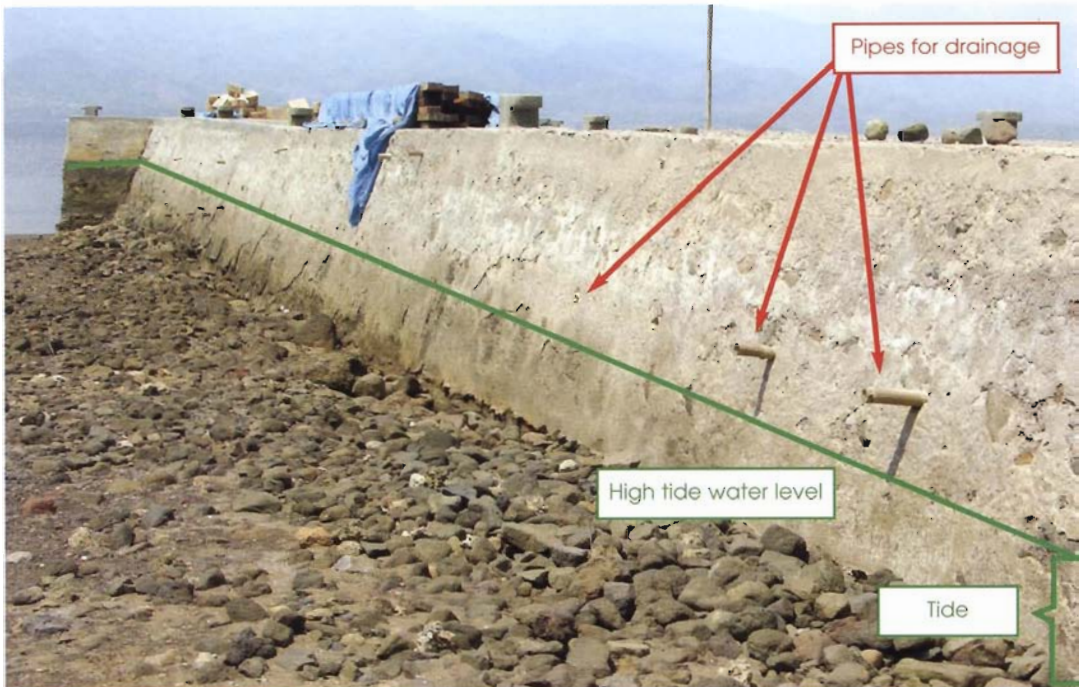
### Why is it better ?

#### **STRUCTURE - Stairs**

- For maintenance reasons the access to the walls of the pier must be possible.

#### **Alternative:**

- A ladder to climb to the sea ground.



Drainage of the access road must be possible at high tide too

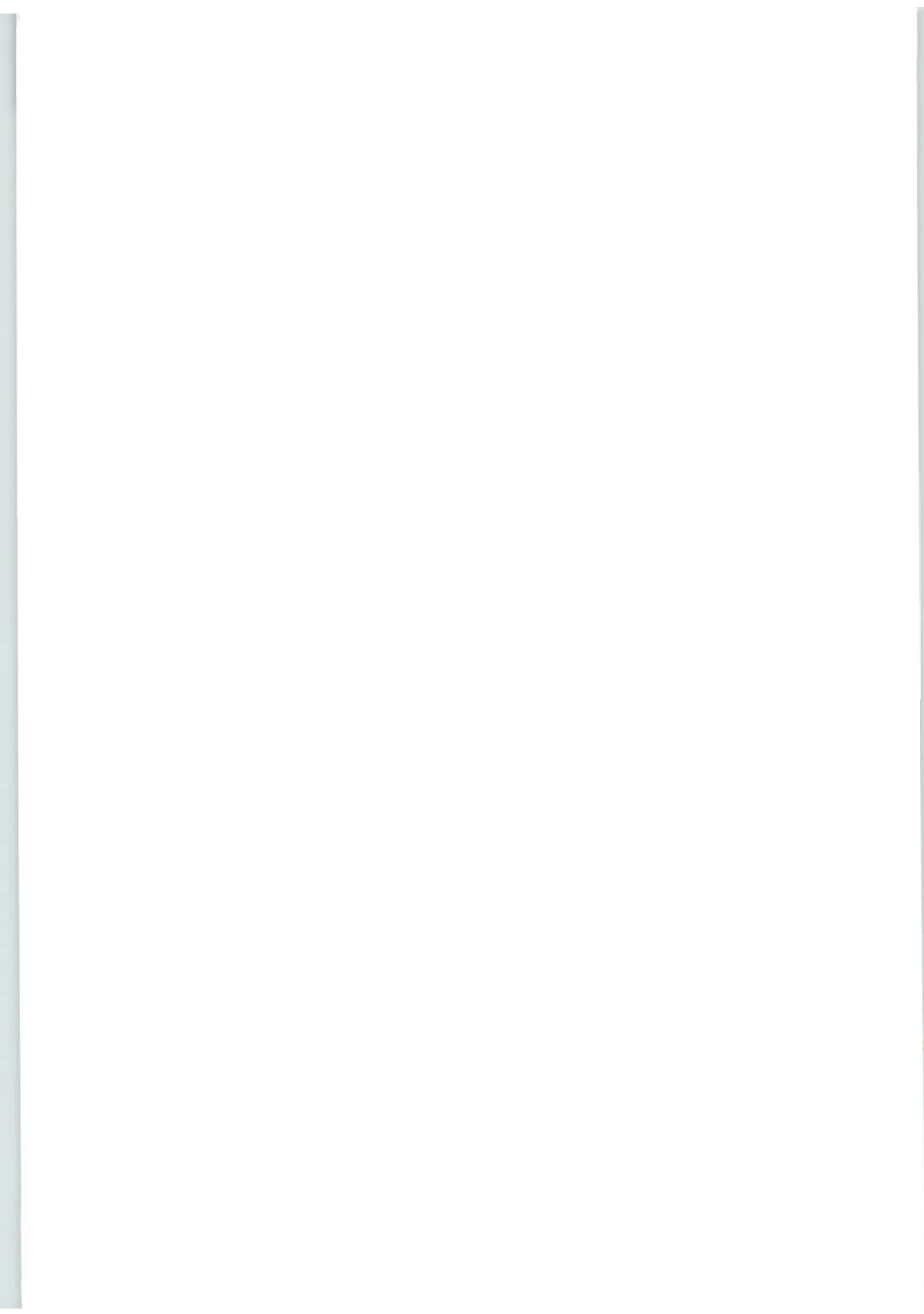
### Why is it better ?

#### **STRUCTURE - Drainage**

- The pipes for drainage have to be situated above high tide water level.
- The sucked water can discharge.

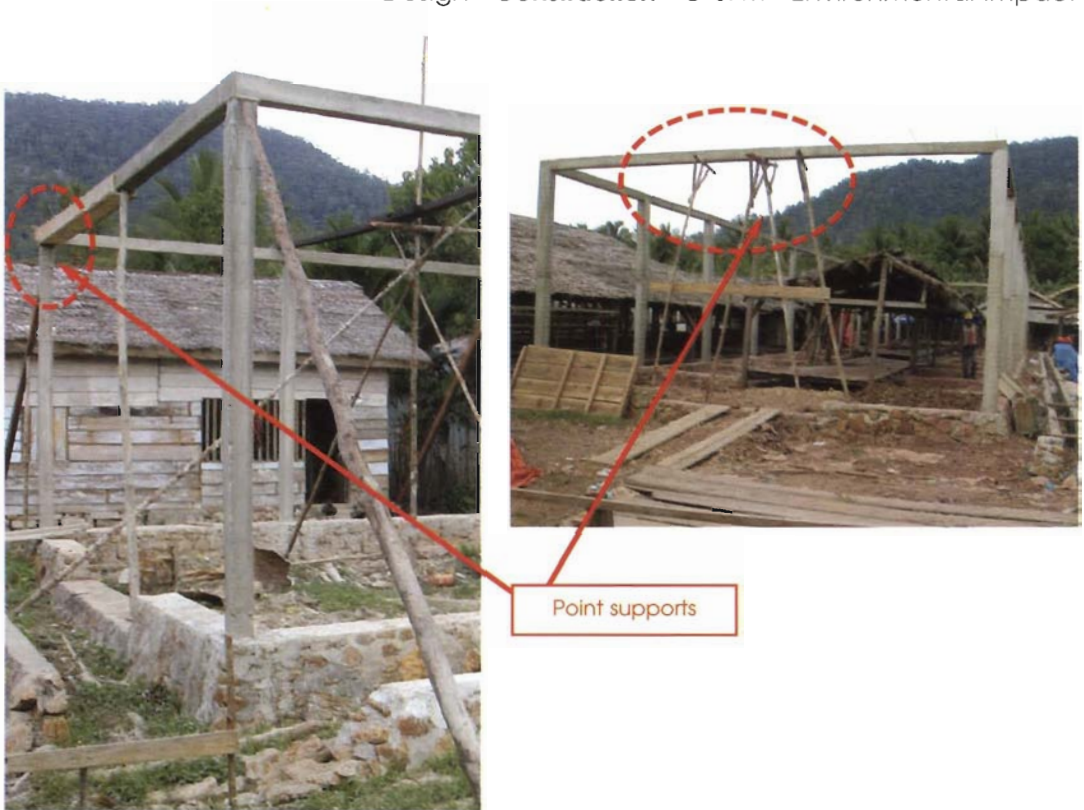
#### **Alternative:**

- Seal the surface of the pier, so no water can seep away.



# MARKET





Concrete beams must be properly supported, not just at some points

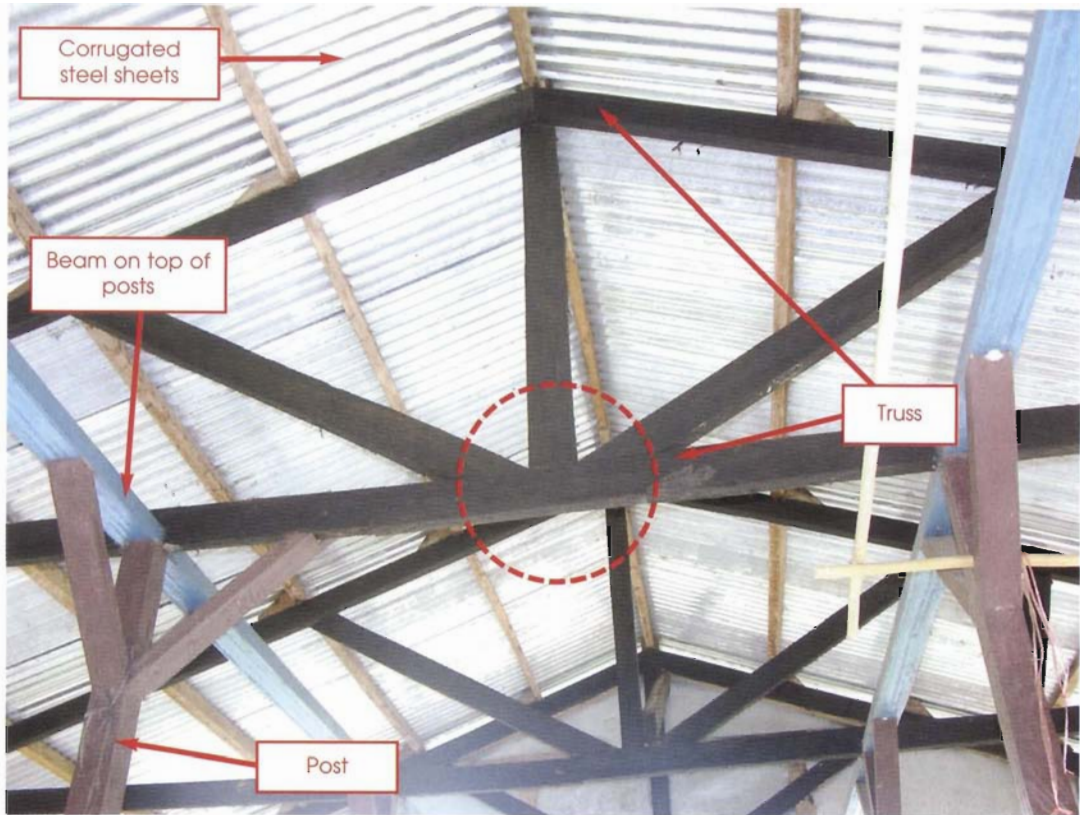
### How can I do it better ?

#### **CONSTRUCTION - Concrete Work**

- Support the formwork for beams over its whole length (from column to column)
- Concreting has to be done in one go - without interruption

### WHY ?

- Formwork must not be removed until the concrete has reached its full strength



Wooden roof truss on wooden pillars are weak

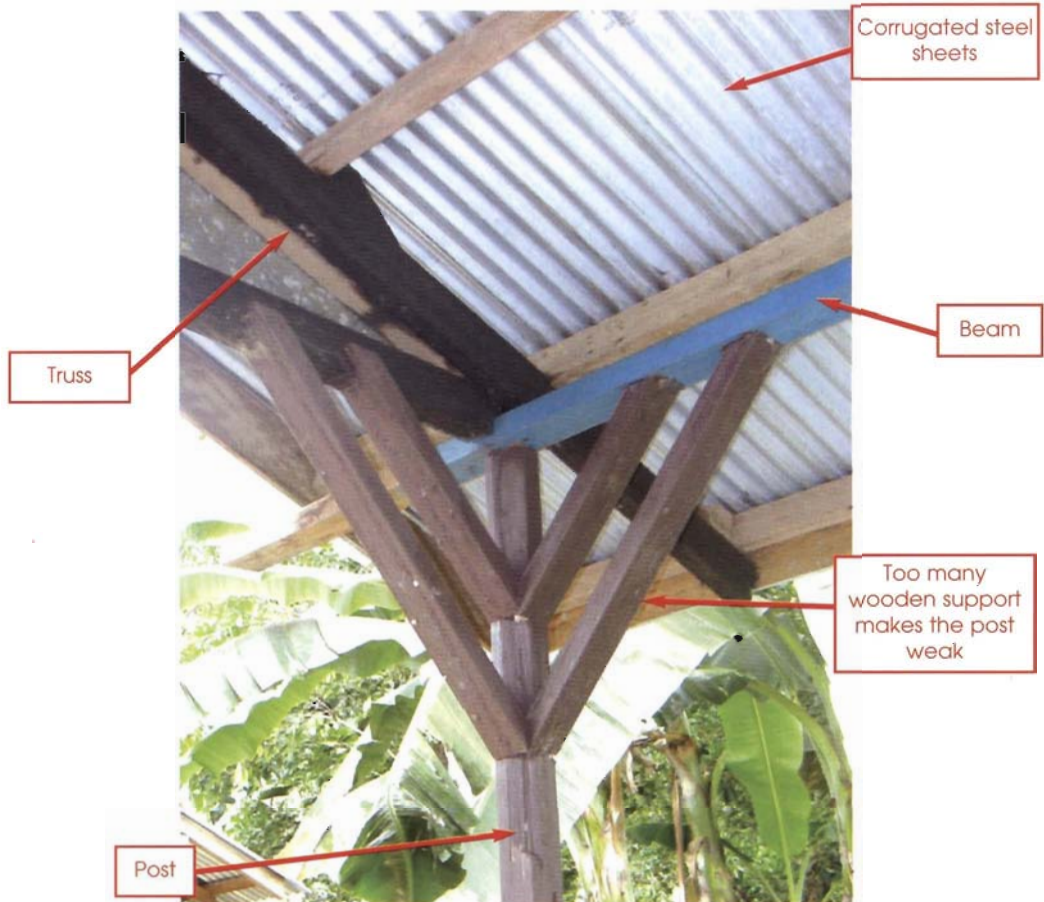
### How can I do it better ?

#### **CONSTRUCTION - Wooden truss**

- Place 2 woods to connect the diagonal and vertical beams in both sides.
- Then put the steel strap (see the good example) on the vertical beam.

### WHY ?

- A connection wood between diagonal and vertical beam will make the truss stronger especially against the wind load.
- The function of steel strap is also to add the strength of wooden connection.



Wooden Post

### How can I do it better ?

#### **CONSTRUCTION - Wooden truss**

- Take the two wooden support at the above side which used to support horizontal beam and the truss.

#### **WHY ?**

- There would be wasteful if using 4 supports as well as make the coloum more weak due to many connections.





**Market sheds Type 1:**  
Concrete slab, wooden superstructure and metal roof

### Why is it better ?

#### **CONSTRUCTION**

- Wood is a low cost and easy construction material
- Wood structures must be well maintained, by painting and replacing damaged elements

#### **Alternative:**

- Concrete posts with wooden beams on top and wooden rafters (see Type 2)
- Concrete columns with concrete beams on top and wooden roof girders (see Type 3)



Beam Wooden roof truss on wooden posts

See detail

Beam



Detail of market superstructure Type 1



**Market shed Type 2:**  
Concrete columns, wooden roof structure and roofing tiles

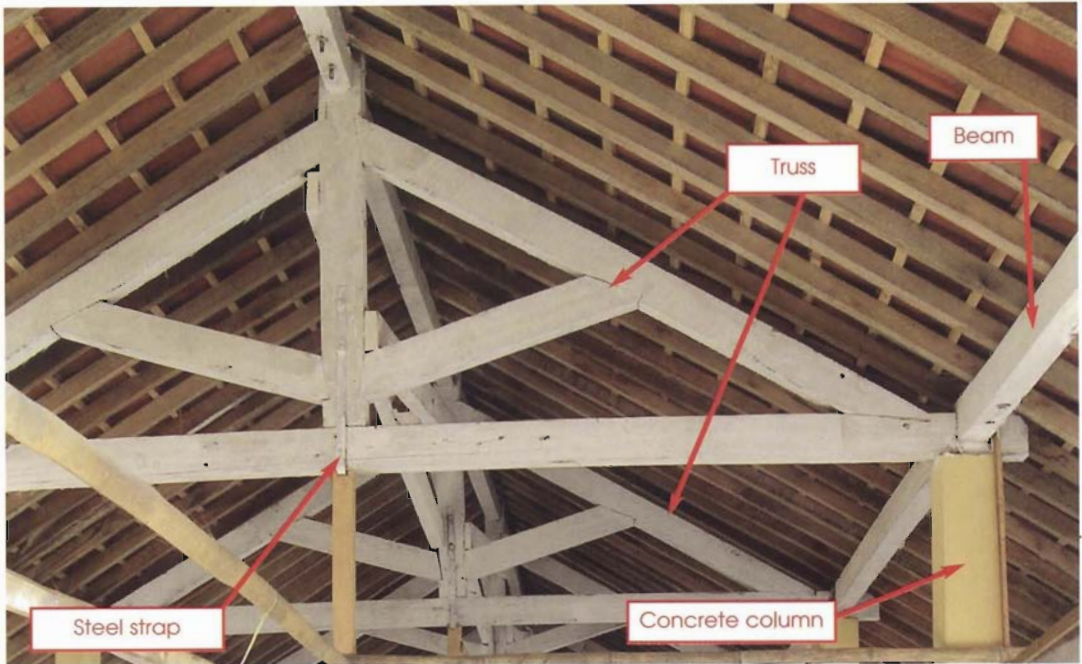
### Why is it better ?

#### **CONSTRUCTION**

- Concrete for the columns is stronger and more durable, but more expensive than wood.
- The roof trusses and rafters have to be stronger when roofing tiles are used, because of their weight.
- Concrete is easier to maintain.

#### **Alternative:**

- All structural elements are made of wood (see Type 1).
- Concrete columns with concrete beam on top and wooden roof girders (see Type 3).



Wooden roof truss on concrete columns



Detail of market superstructure Type 2



**Market shed Type 3:**  
Concrete columns and grid, wooden girders and corrugated steel sheets for the roof

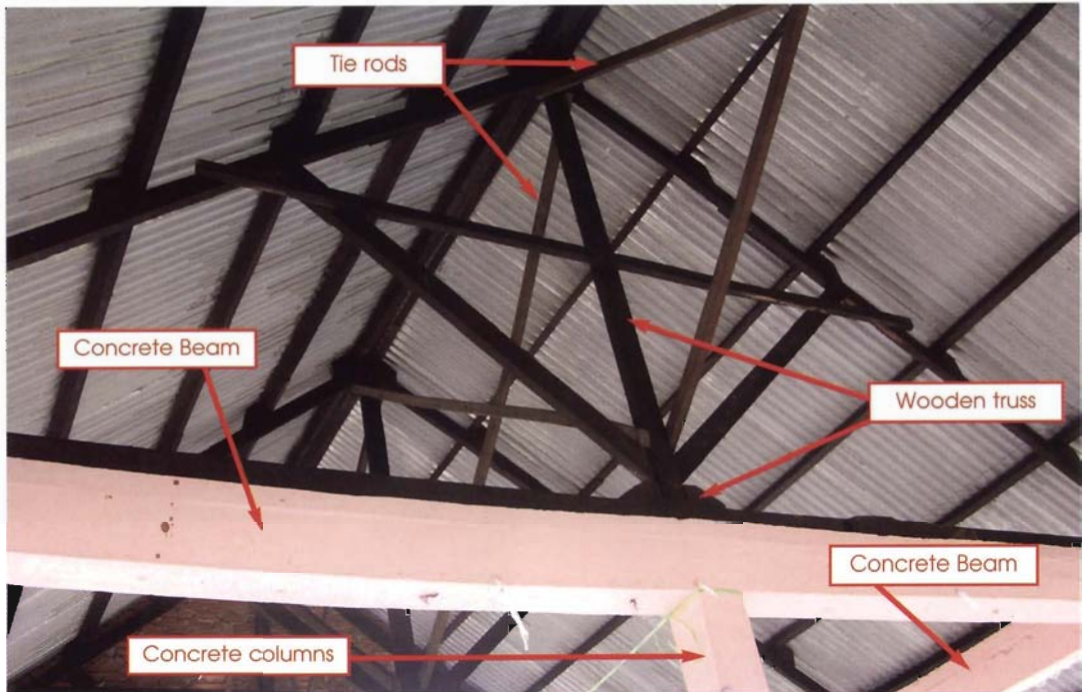
### Why is it better ?

#### **CONSTRUCTION**

- Concrete is much more durable, but also much more expensive than wood.
- This type of construction is suitable for larger markets.
- Concrete is easier to maintain.

#### **Alternative:**

- All elements of the structure are made of wood (see Type 1).
- Concrete columns with wooden beams on top and wooden roof girders (see Type 2).



Wooden roof trusses on concrete columns and beams



Detail of market superstructure Type 3

## Design - Construction - O & M



Well built ditch around the slabs of the sheds

### Why is it better ?

#### **DRAINAGE**

- Good drainage is needed in and around markets for hygienic reasons.
- Drains have to be cleaned and maintained.

#### **Alternative:**

- No.



Well built toilet for the market people

### Why is it better ?

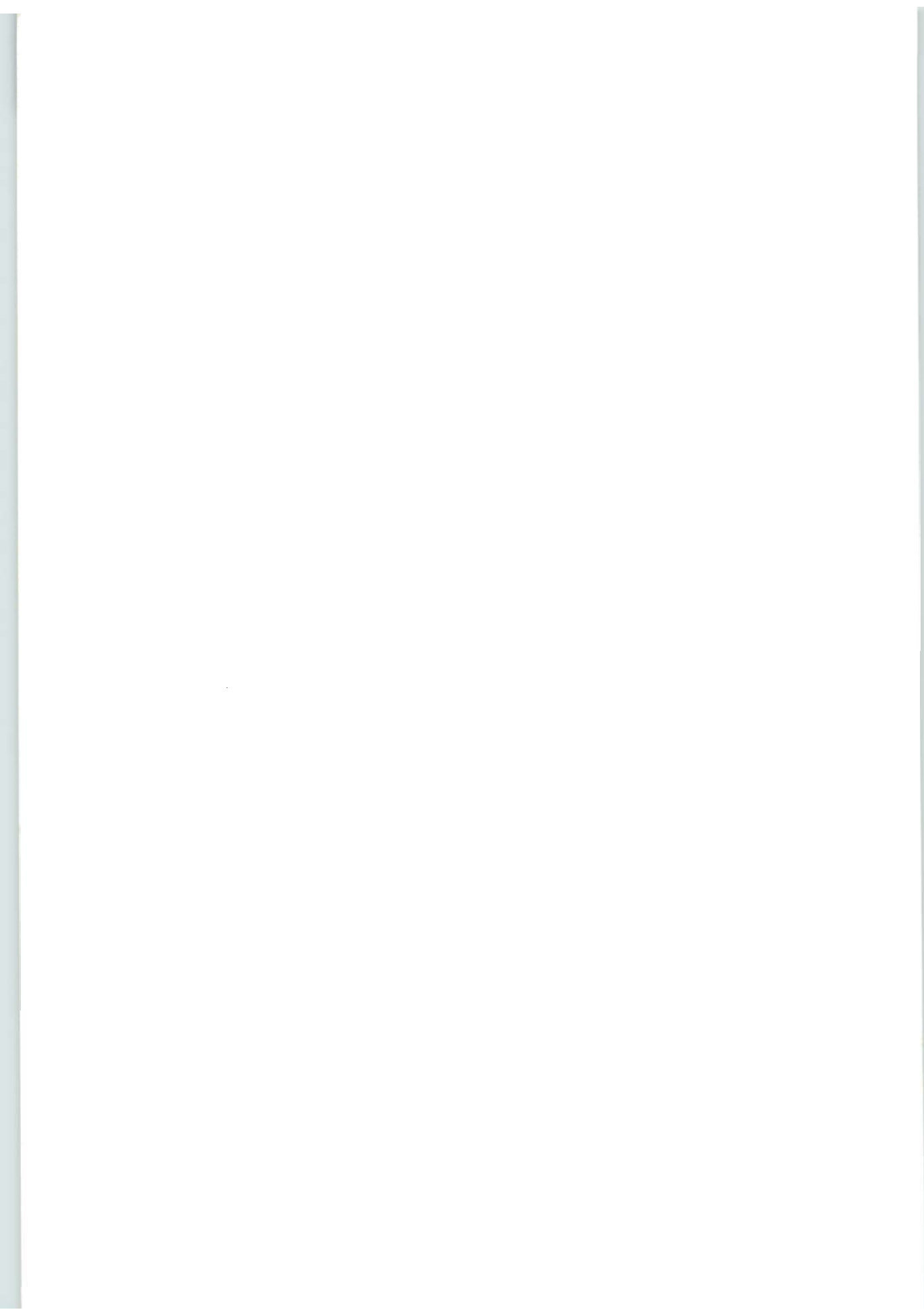
#### **SANITATION**

- Toilets are essential where many people come together.
- Cleaning the toilets is part of good maintenance.

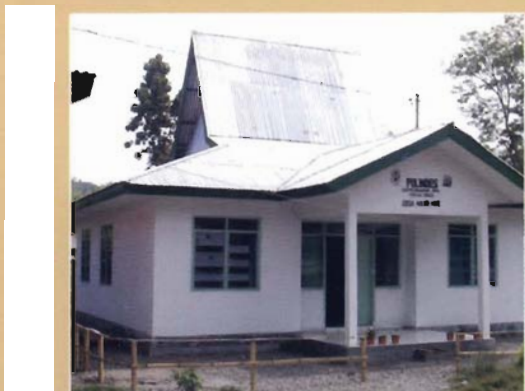
#### **Alternative:**

- No.





# VILLAGE HEALTH CENTER





A well-built Polindes

### Why is it better ?

#### **GENERAL**

- A Polindes consists of a treatment room, a patient's room, delivery room, waiting area and sanitary facilities, as well as a kitchen and a living room for the midwife.

#### **Alternative:**

- Layout could change, but not the number of rooms.

## Design - Construction - O & M



A well equipped treatment room

### Why is it better ?

#### **GENERAL - Furniture**

- The treatment room has to be clean and hygienic.
- A tiled floor makes the cleaning easier.

#### **Alternative:**

- There is no alternative to a high standard of cleanliness.



A patient's room

### Why is it better ?

#### **GENERAL - Furniture**

- The patient's room has to be clean and hygienic.
- Curtains make the room more attractive.

#### **Alternative:**

- There is no alternative to comfort for the young mothers.



Never smoke in a Polindes

Why is it better ?

**GENERAL - Sign**

- Smoking is a health risk of everybody, especially for the pregnant women.

**Alternative:**

- There is **NO** alternative.



An attractive, well-built Kindergarten

### Why is it better ?

#### **GENERAL**

- A Kindergarten should comprise a large room for indoor activities, an outdoor playground and sanitary facilities.
- The dimensions of the building depend on the number of the children expected to be enrolled.

#### **Alternative:**

- No.



Beautify the entrance to the building

### Why is it better ?

#### **GENERAL - Outside Decoration**

- Children like colours and paintings and they will love to go to the kindergarten.

#### **Alternative:**

- There can be different paintings, but there should always be lots of colors.





The equipment and furniture shall meet all needs of the children

### Why is it better ?

#### **GENERAL - Equipment**

- Children want to play and learn in the kindergarten.
- They need a blackboard, tables, chairs, paper & pencils, and many toys.
- Decorate the walls with pictures made by the children.

#### **Alternative:**

- No, because children are the future of the nation and they should get the best education.



Children like colours

### Why is it better ?

#### **GENERAL - Furniture**

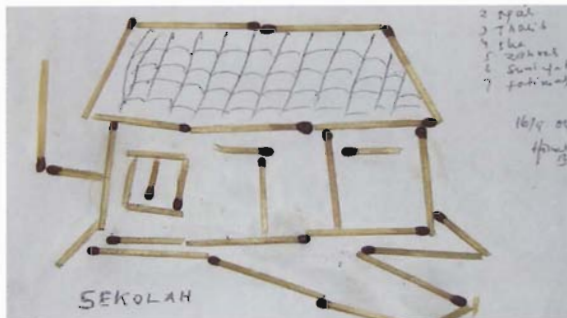
- Paint the furniture in different colours - children like colours.

#### **Alternative:**

- No, colours make life beautiful.



Pictures made by the kids



Some samples of decorations to make the building more attractive

### Why is it better ?

#### **GENERAL - Indoor Decoration**

- Beautify the room - children like to see their own handycrafts.

#### **Alternative:**

- No, the creativity of the kids should be supported.

---

**Design - Construction - O & M**



Outdoor equipment for the playground



Indoor equipment

**Why is it better ?**

**GENERAL - Playground & Toys**

- Children cannot sit still a long time - they have lots of energy and need to be active.

**Alternative:**

- There is a lot of different gymnastic equipment available.

# SCHOOL





Well-built school building

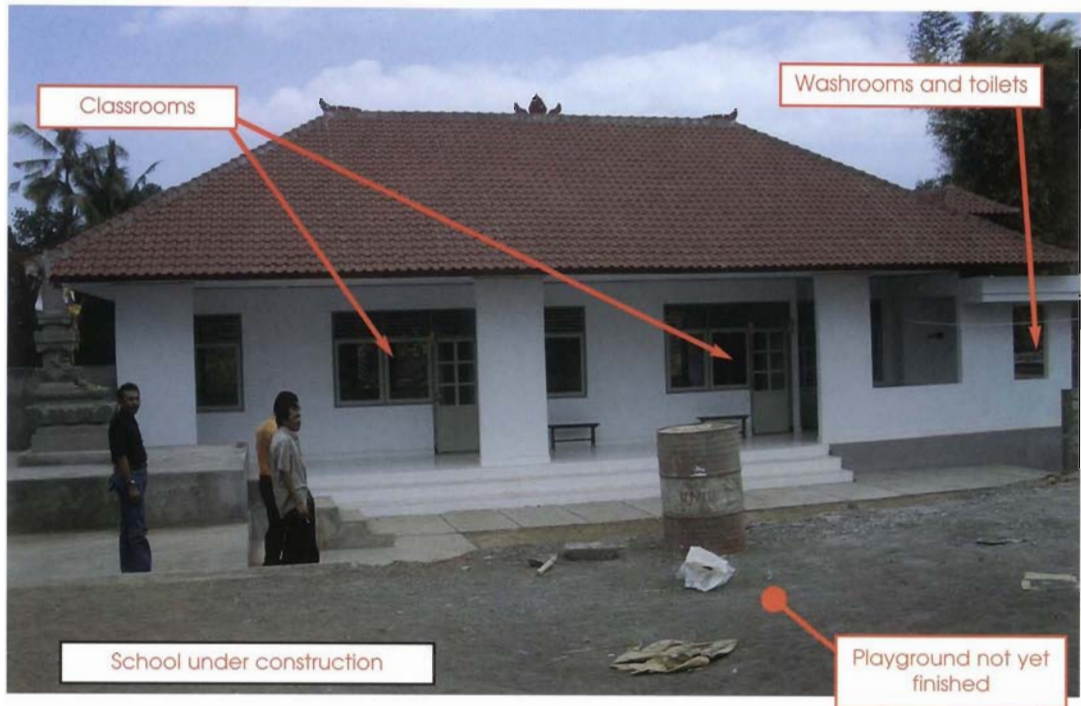
### Why is it better ?

#### GENERAL - Design

- Big windows make a classroom bright which is good for the children.
- Nicely painted walls makes the rooms cheerful and the children will be happy and learn better.
- A tile floor is much easier to keep clean → less maintenance.

#### Alternative:

- No.



Well built school building

### Why is it better ?

#### **GENERAL - Design**

- The large roof overhang gives shade to the classrooms and keeps them cool.
- White walls look clean and bright → but it is more work for maintenance to keep them clean.
- A tile floor is much easier to keep clean → less maintenance.

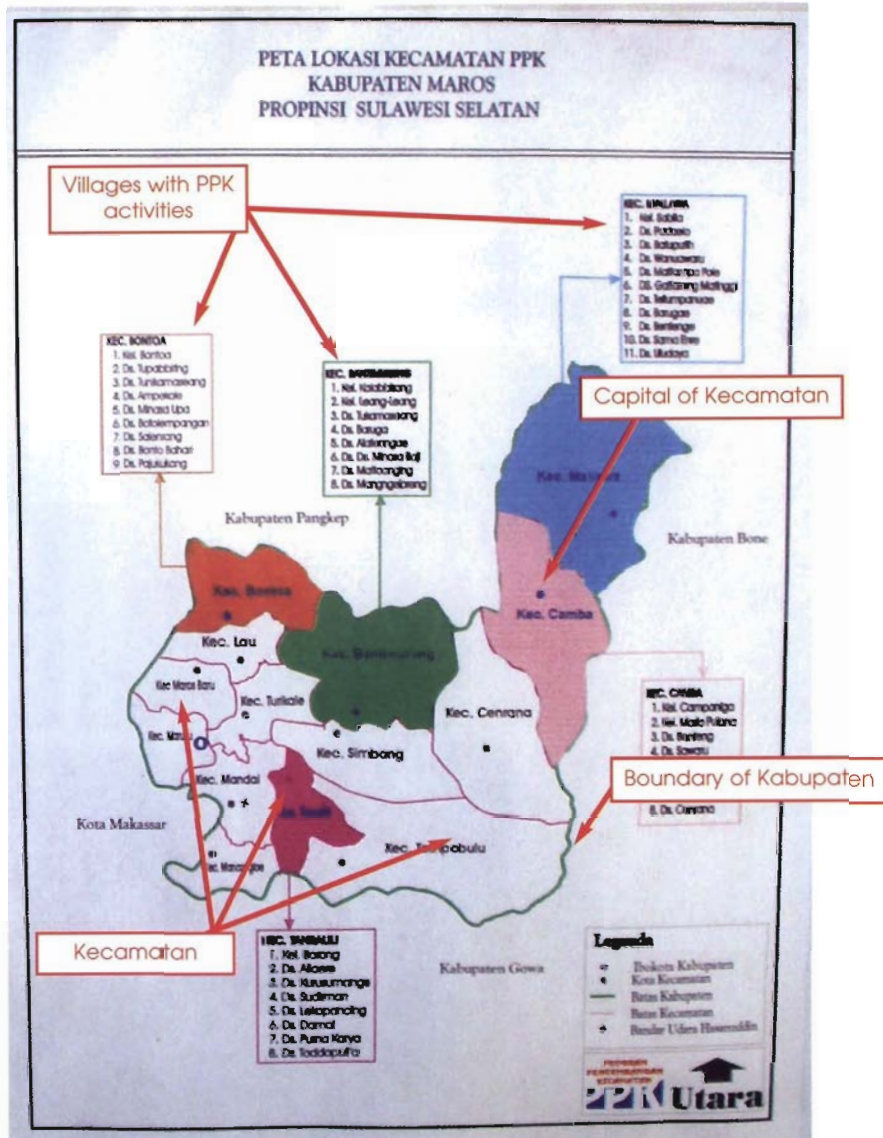
#### **Alternative:**

- There is no alternative to a good design.

# DOKUMENTATION & INFORMATION







A map of the Kabupaten is essential for a good survey and overview

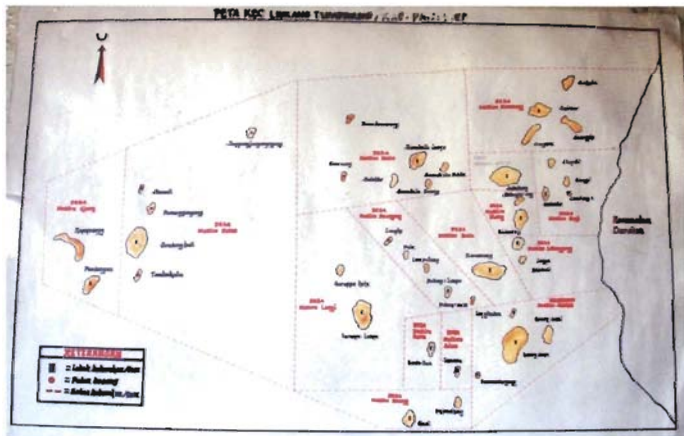
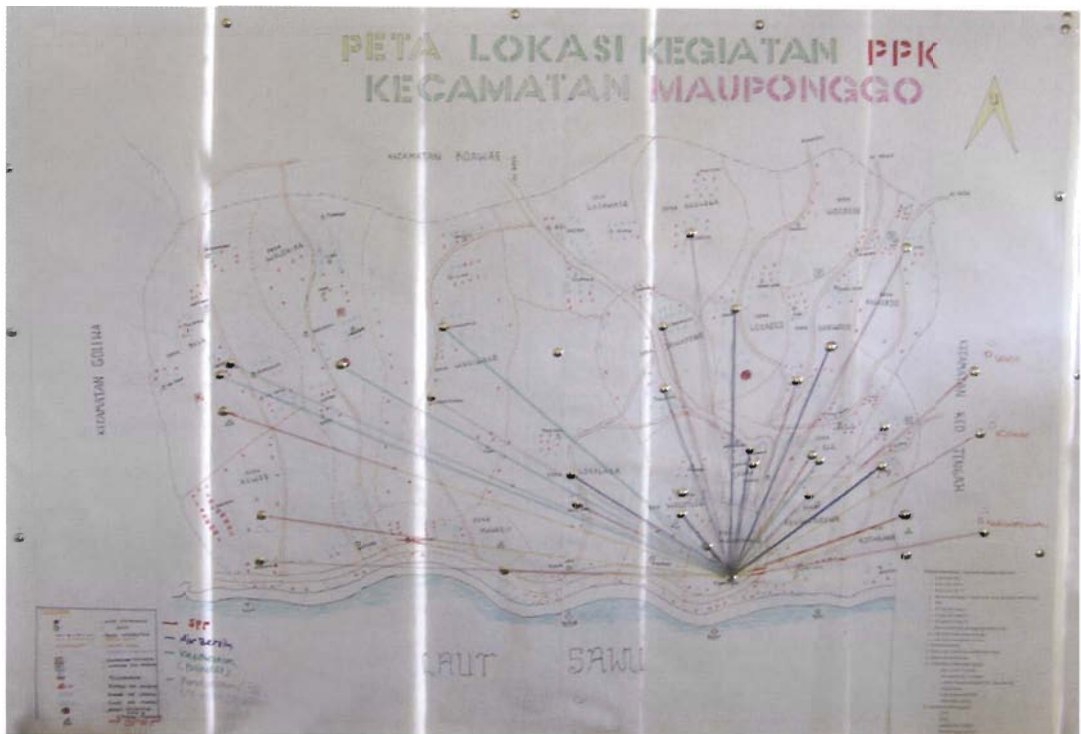
### Why is it better ?

#### ORGANISATION - Map

- A map shall show all Kecamatan, villages and all activities of PPK.

#### Alternative:

- See following page.



**Some alternatives how a map should look like**

The map shall show:

- Kecamatan
- PPK activities
- Location of activities
- Main roads, river, lakes and all other important features





What's happening in the Kabupaten or Kecamatan?

Why is it better ?

**ORGANISATION - Information Board**

- Information and transparency are the basic rules of PPK projects.

**Alternative:**

- More information.



Filing of all activities

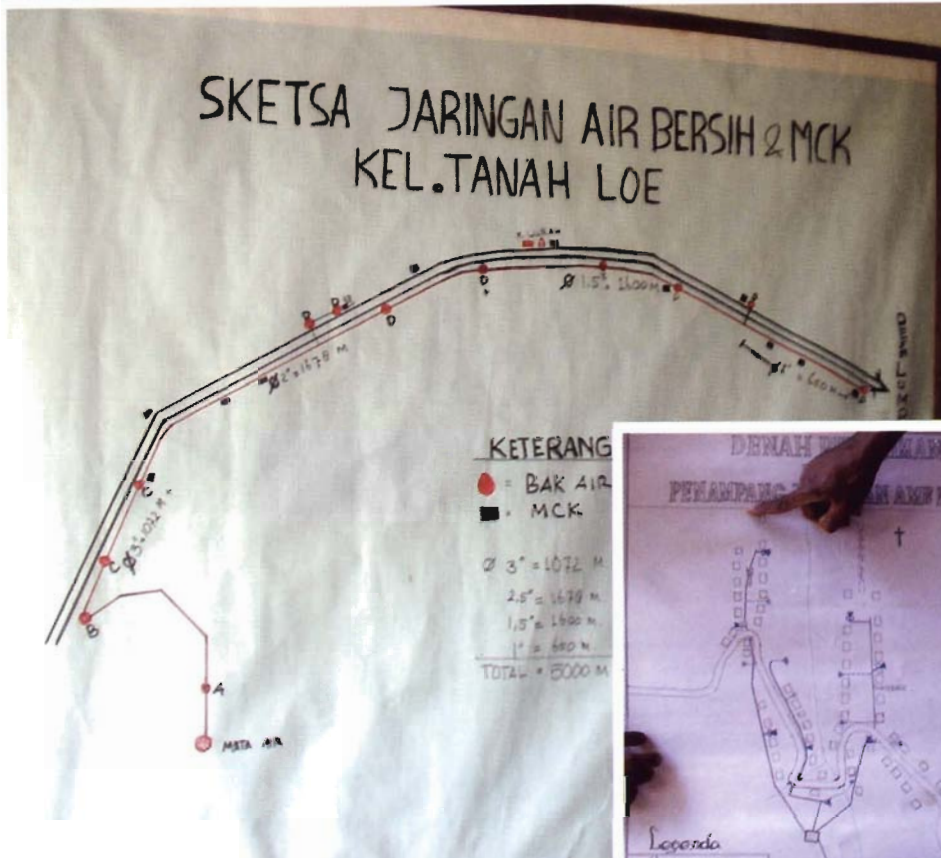
### Why is it better ?

#### **ORGANISATION - Filing**

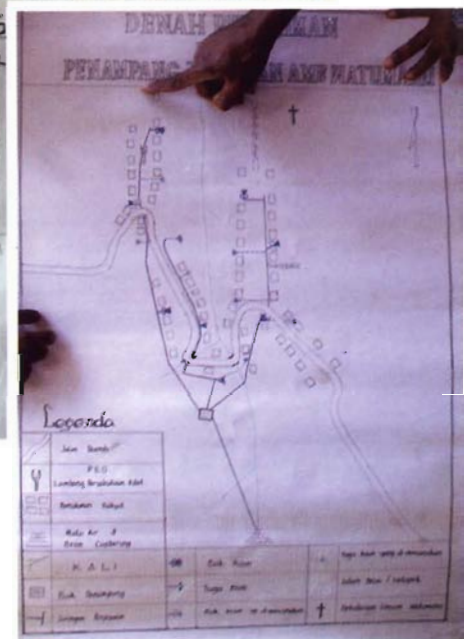
- Keep all documents filed, so can be found easily when needed.

#### **Alternative:**

- The system of filing may change, but not the importance of filing.



Overview maps



Why is it better ?

**ORGANISATION - Drawing**

- An overview map drawing makes sure that a project is easily understood by everybody.

**Alternative:**

- No.



Activity boards give access to everybody at any time

### Why is it better ?

#### **ORGANISATION - Activity Board in the Village**

- Make all your activities transparent to everybody - a basic rule of PPK.

#### **Alternative:**

- The shape can change, but not the information, it must be accessible.



Board on site with the basic data of a project

### Why is it better ?

#### **ORGANISATION - Board of Project on Site**

- Make the project information accessible to everybody - make it transparent - a basic rule of PPK.

#### **Alternative:**

- The shape may change, but not the information (see following page).

**PPK PAPAN PROYEK**  
 < PROGRAM PENGEMBANGAN KECAMATAN >

JENIS KEGIATAN : PERPIPAAN AIR BERSIH  
 VOLUME : 2500 m  
 DESA : MANGILU  
 TAHUN : 2004

JADWAL PELAKSANAAN : 29-3 % 25-6-2004  
 ANGGARAN DANA : Rp. 61.198.172  
 SPP Rp. 10.000.000 TPK

**PROGRAM PENGEMBANGAN KECAMATAN**  
 DESA : BONTO CINDE KEC : BISSAPPU

KEGIATAN : PRASARANA LISTRIK DESA  
 VOLUME : 2 (DUA) UNIT  
 BIAYA FISIK : Rp. 100.016.474,05  
 OPS. UPK (2%) : Rp. 2.105.609,98  
 OPS. TPK (3%) : Rp. 3.158.414,97  
 TOTAL BIAYA : Rp. 105.280.499,00  
 PELAKSAMA : TPK / MASYARAKAT  
 SIFAT BANTUAN : LEPAS

SUMBER DANA	PPK	105.280.499,-
	SWADAYA	117.189.350,-

**PAPAN PROYEK PASE.II**  
 TH. ANG. 2003/04  
 DESA: PAT TANE TEANG-KECAMATAN  
 TDMPOBULUR T KAB. BANTAENG  
 JENIS KEGIATAN: RBH. PRASARANA JALAN  
 VOLUME : 3x1000 M 1 UNIT  
 JUMLAH BIAYA : 79.944.400.00  
 DO. UPK 2% : 3.921.138.53  
 DO. TPK 3% : 5.881.707.79  
 TOTAL BIAYA : 79.944.400.00  
 PELAKSANA : TPK. MASY. 3. BULAN  
 SIFAT BANTUAN : LEPAS  
 SUMBER : DARI PPK 79.944.400.00  
 DARI MASY 5.919.350.00

**PROGRAM PENGEMBANGAN KECAMATAN**  
 ( PHASE II ) KEC. SANPARA

DESA : LASOSO  
 JNS. KEC. : SUMUR BOR+P. PIPAAN+BAK  
 VOLUME : 1 UNIT+1.140 M+1 UNIT  
 BIAYA : RP. 31.250.310.11  
 PLS. TPK : 1. KETUA: ANHAD.L  
 2. SEK. : SARIPIN.S  
 3. BEND. : MARTINA

JCK. WKT. PLS: HL. TGL 21 APRIL 2004  
 SLS. TGL 21 JULI 2004

**PPK PROGRAM PENGEMBANGAN KECAMATAN**  
 TAHUN ANGGARAN 2003  
 DESA CINTARAJA KECAMATAN SINGAPARNA

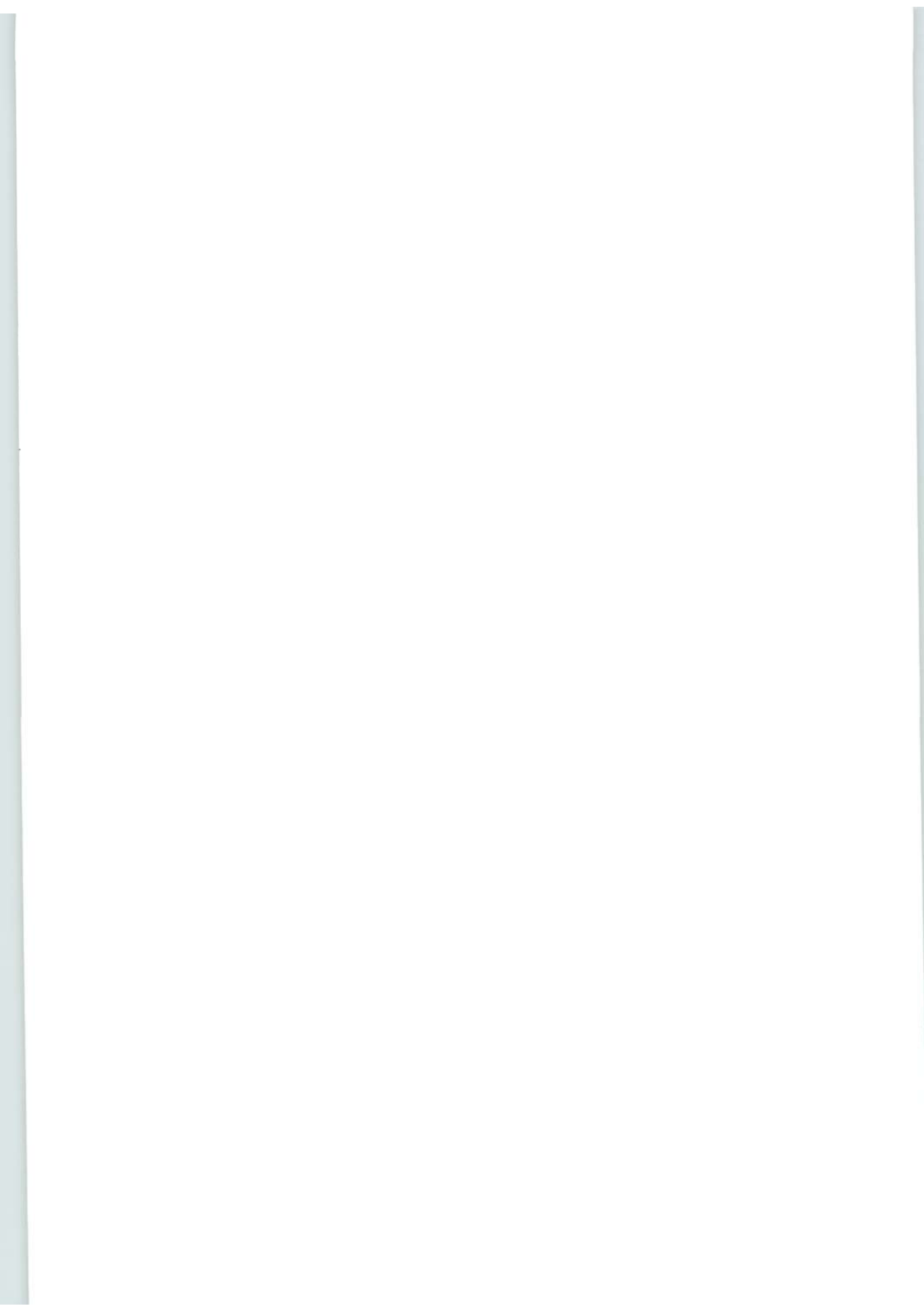
Jenis kegiatan: Perbaikan Bendungan Dan Saluran

Lokasi kegiatan : Dusun I  
 Volume kegiatan : 838 9M<sup>3</sup>  
 Penerima Manfaat : 500 KK Ketua TPK  
 Tanggal Mulai : 13 DES 03  
 Jangka Waktu : 3 Bulan

The information is important, not what it looks like - some samples









PROGRAM PENGEMBANGAN KECAMATAN (PPK)

**THE WORLD BANK OFFICE JAKARTA**

Jakarta Stock Exchange Building Tower II / 12th Fl.  
Jl. Jenderal Sudirman Kav. 52-53 Jakarta, 12910 Indonesia  
Phone : (62-21) 5299 3000  
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