

## MODULE 4

## RURAL ROAD DEFECTS AND CAUSES

### Objectives

After fulfilling Module 4, you will:

- Understand popular defects of rural roads & structures
- Understand main causes of defects.
- Apply to the local road network and clarify road defects of local road network.

### Requirement

The participants are required to have comprehended following module:

- Module 1: "*Local Road Network*"

### Methodology

- The participants are introduced (basically by pictures, figures...) some typical defects of road, bridge, culverts ... in the Commune Road Network ( typical defects, typical structures & typical regions)
- The participants define main causes of the introduced defects (information exchange and discussion)
- The participants apply to their local road network condition to define the defect phenomena (giving names of defects and comprehend the nature).
- Self-Assessment

### Training Kit

- Rural Road Maintenance Handbook
- Module 4: "*Rural Road Defects and Causes*"

### Studying Activities


1. Learn about the defects of road, bridges, culverts,... in the rural road network.
2. Learn about & define the causes of road defects
3. Apply to the actual local road network
4. Self - assessment

### 1. Identify the defects of road structures, bridges, culverts in Rural Road Network.



Look at the picture of main *defects* of road structures, bridges and culverts... below, fill in the boxes with names of defects and appropriate maintenance activities.

Excessive vegetation growth on road shoulders.....



Routine Maintenance 1

1


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2


3



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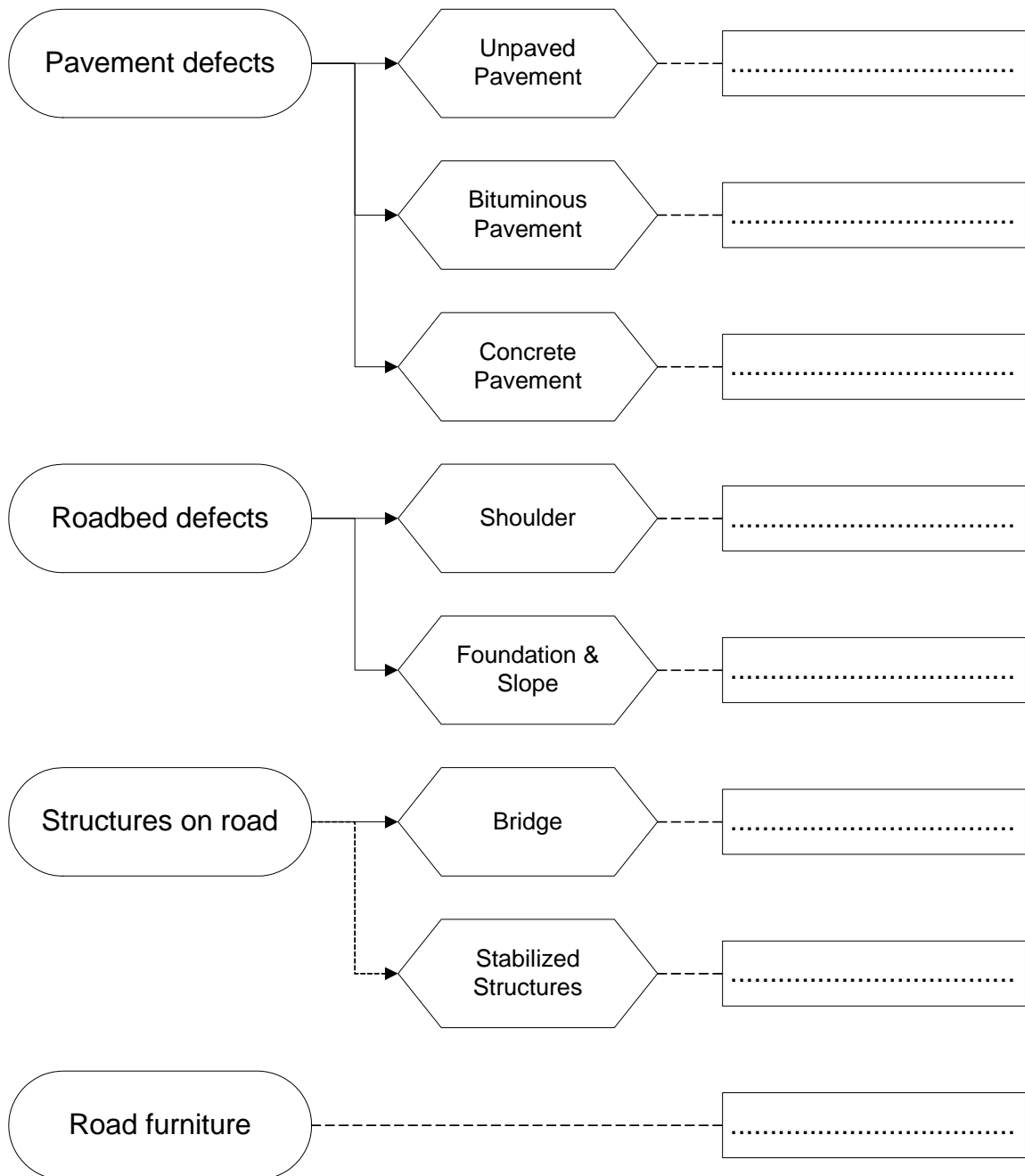
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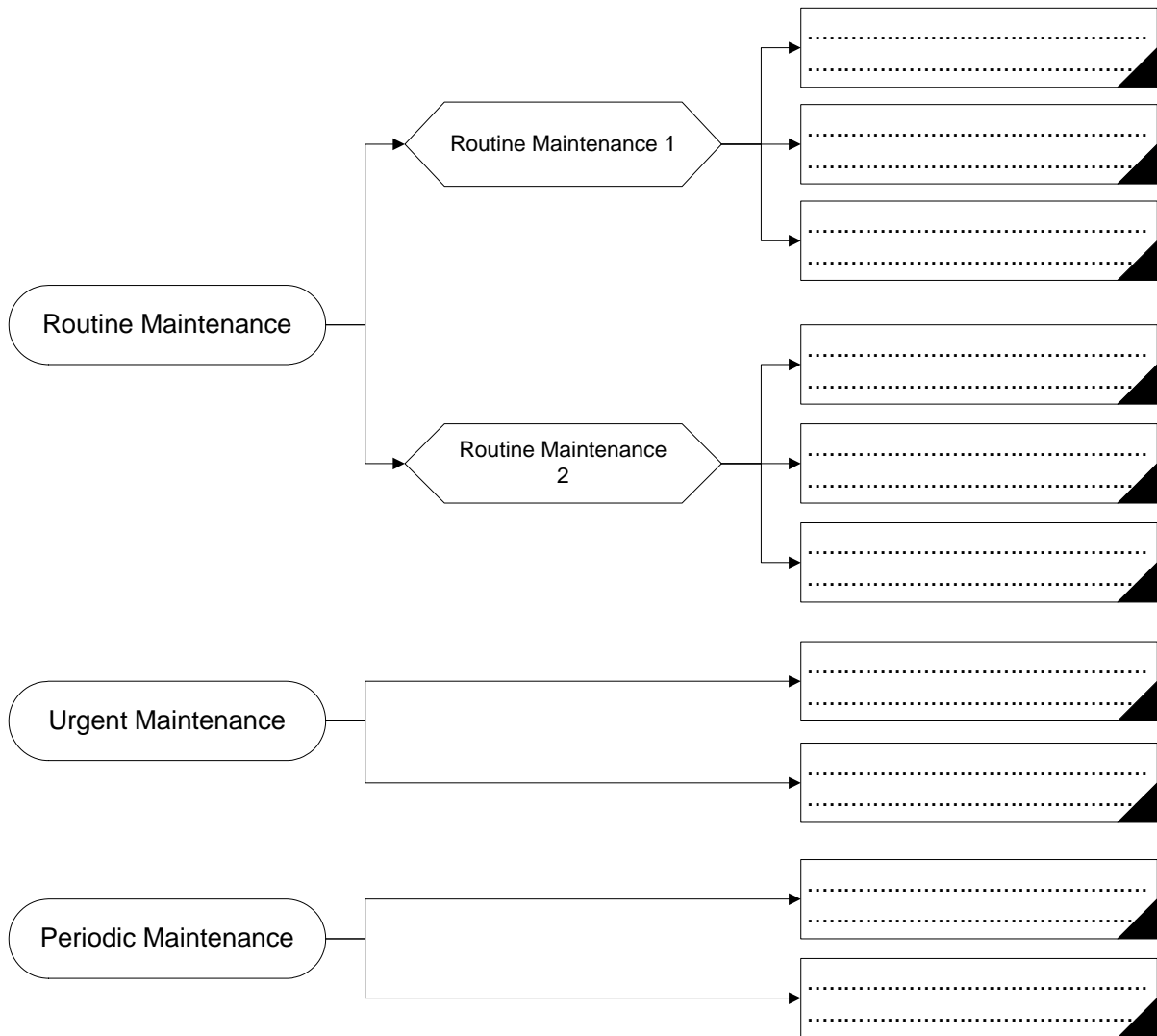


Put the number of defects stated in the above pictures in the appropriate boxes of following frames.





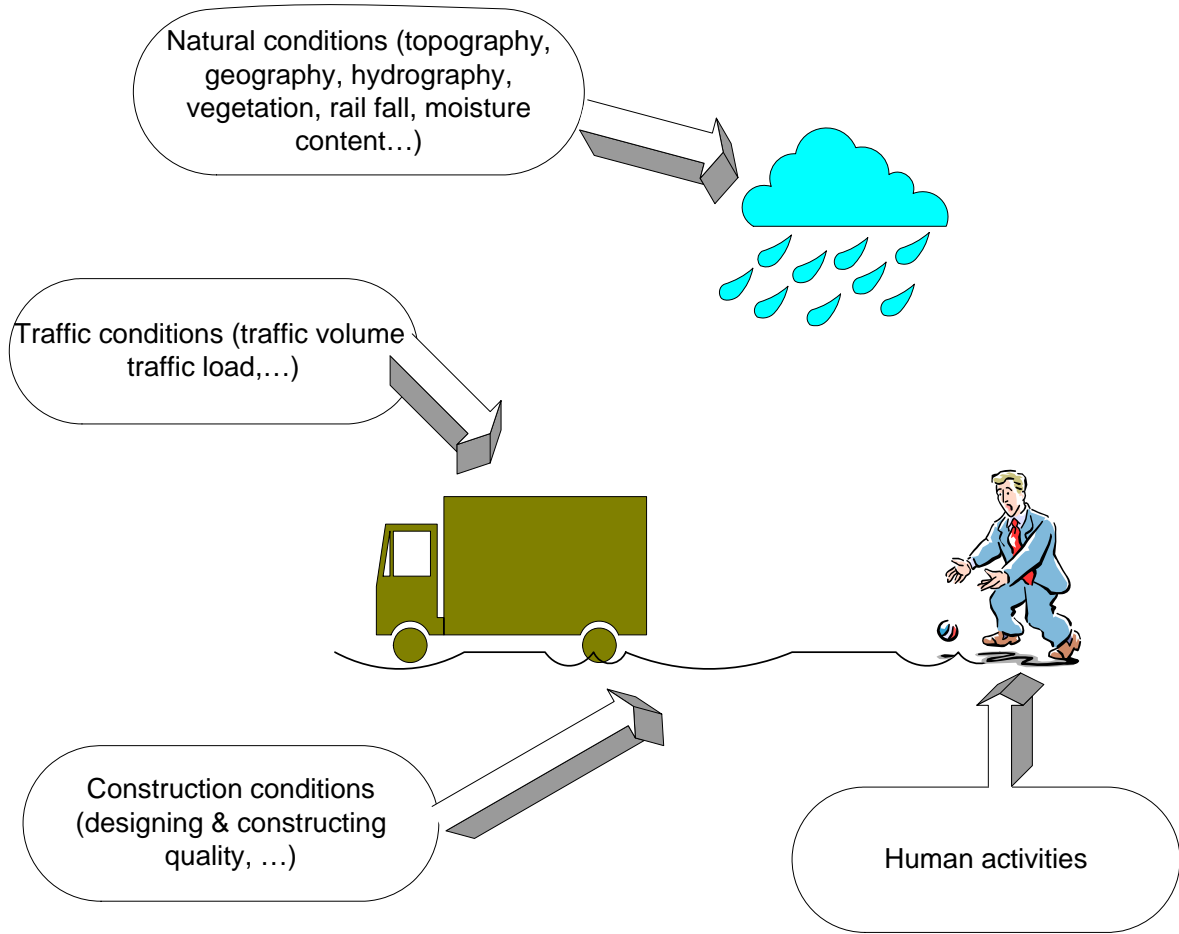
List names of 10 defects of your local Road Network and put them in appropriate boxes corresponding to maintenance types.



## 2. Find out causes of Rural Road defects



Look at the below figure about *physical conditions* of rural road and *main causes* of road defects.



*Possible causes of defects outlined in pictures above*

(1)	..... .....
(2)	..... .....
(3)	..... .....
(4)	..... .....
(5)	..... .....
(6)	..... .....

(7)	..... .....
(8)	..... .....
(9)	..... .....
(10)	..... .....
(11)	..... .....
(12)	..... .....
(13)	..... .....
(14)	..... .....
(15)	..... .....



NOTES

*Water is an enemy of road -  
 Don't let water stagnate on the road surface or  
 road shoulders.*



**Kiểm tra - Danh gia**

**Assessment**

1. Tick the boxes to indicate Routine Maintenance 1 and Routine Maintenance 2 corresponding to appropriate defects.



<i>Defects</i>	<i>Routine Maintenance 1</i>	<i>Routine Maintenance 2</i>
- <i>Soft spots on the earth road</i>		
- <i>Edge damage of bituminous pavement</i>		
- <i>Culvert slide down</i>		
- <i>Side ditch erosion</i>		
- <i>Side drain deposition</i>		

Good

Not good

2. Fill in the following table with possible causes of defects as shown in the below pictures:



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Good

Not good