# Final Report on the Study on Safety Management for Construction Work in Japanese ODA Project

# Workers Training Materials for Hazard Prediction

#### February 2012

#### JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

The Overseas Construction Association of Japan, INC

EID
JR
12-025

#### Final Report on the Study on Safety Management for Construction Work in Japanese ODA Project

#### **Workers Training Materials for Hazard Prediction**

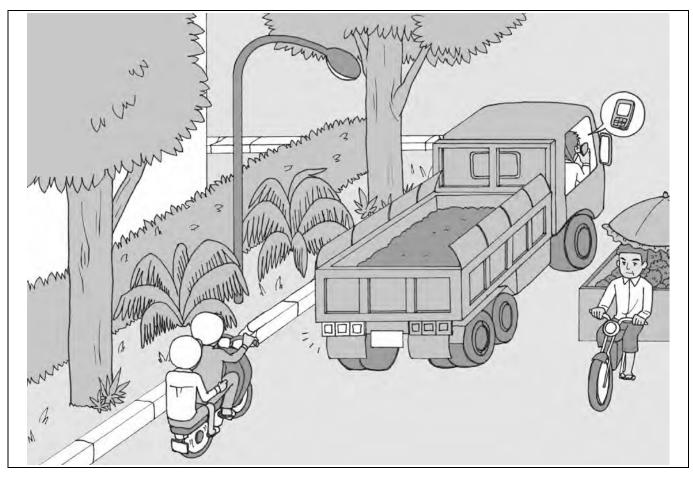
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#### How to use this handout

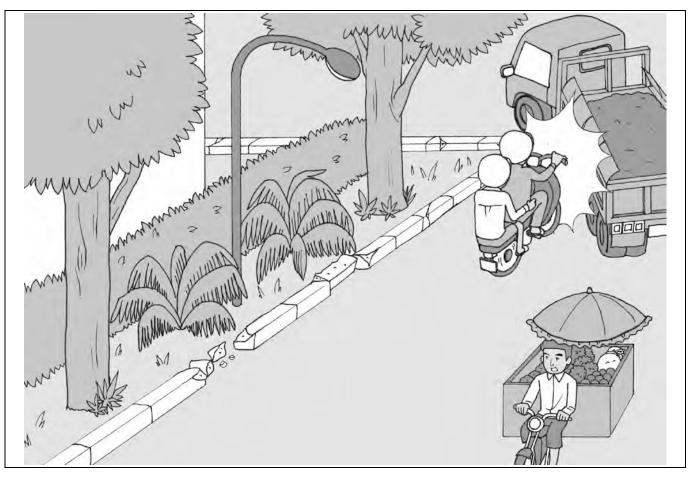
- 1. Please check illustration (A) in each case.
- 2. Where are the underlying potential dangers or risks? Please think and list up.
- 3. Why is that dangerous? Please think.
- 4. If you are placed in the scene, what will you do? Please think again.
- 5. Illustration **(B)** is one of the results when no countermeasures are taken against potential risks.

#### Dump truck is running on the road and trying left turn...



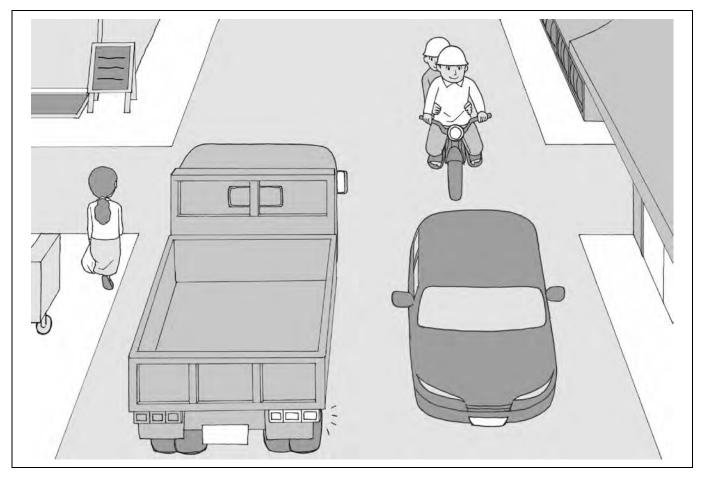
< NOTE >

Driver is focused on the mobile phone, and a motorcycle behind crashed into the truck.



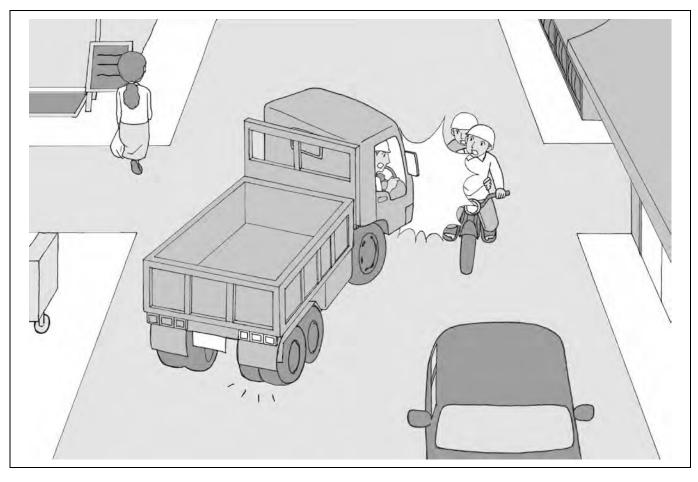
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# Dump truck is trying right turn, a motorcycle is coming closer!



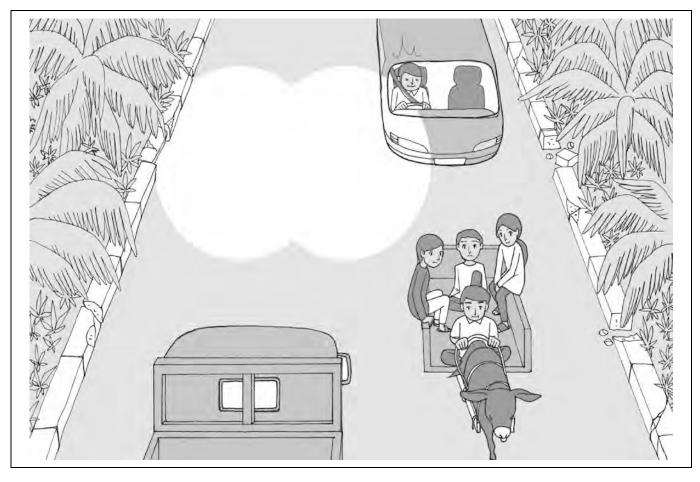
<note></note>	

### Dump truck collided with the motorcycle.



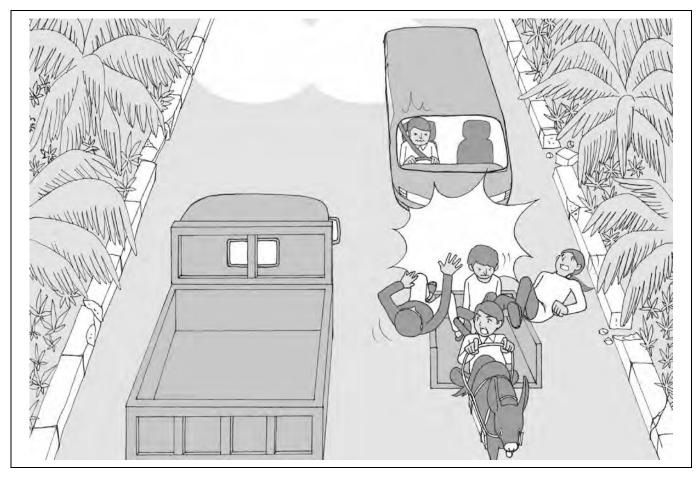
< NOTE >	
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After work, a commuter car is moving for the camp, driver gets glare of oncoming headlights...



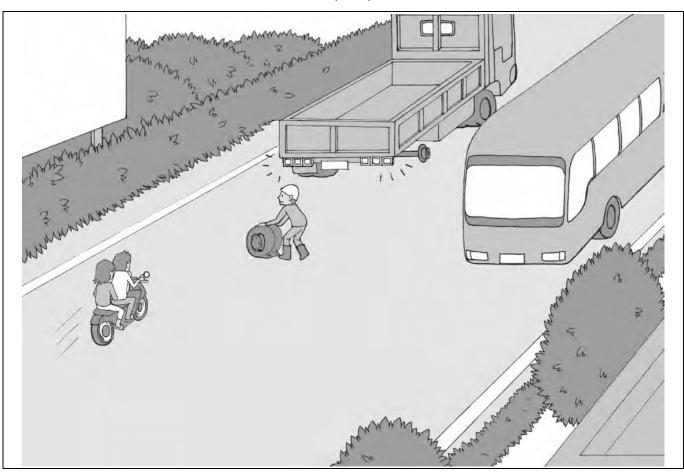
< NOTE >	
	01888811888118881188811888118881188811

Driver was dazzled by headlights, the car crashed into a cart running in front of the car.



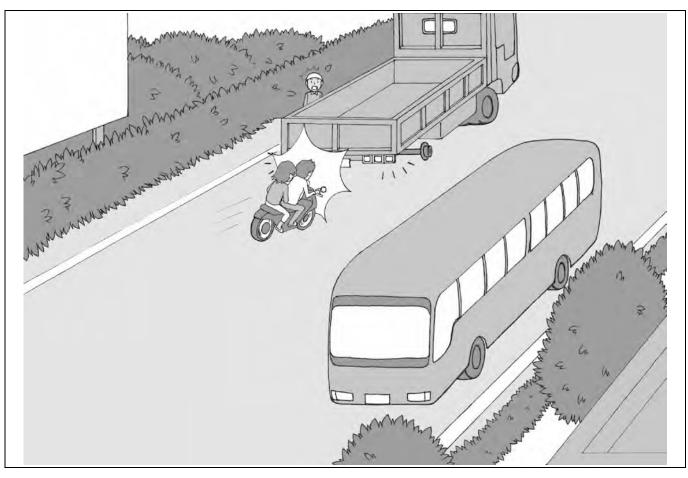
NOTE >	

# A man is changing a flat tire of a truck, and a motorcycle is approaching from behind...



(NOTE >	_

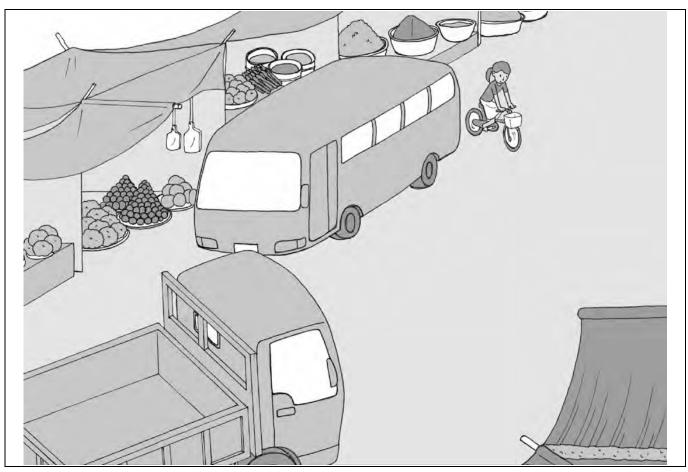
#### The motorcycle crashed into the truck.



< NOTE >	

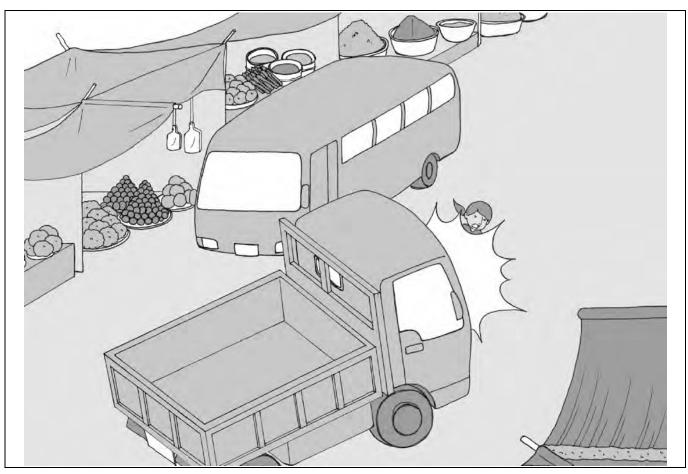
The light truck is running on the road, a child riding on a bicycle is coming from behind the parked bus.





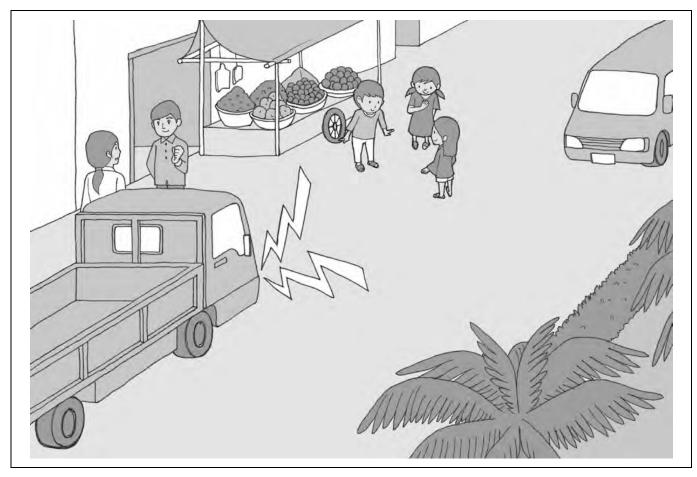
<nute></nute>

### The light truck hit the child dashed out by bicycle.



< NOTE >

#### Case6 Children are playing on the road, driver beeps the horn...



<note></note>	
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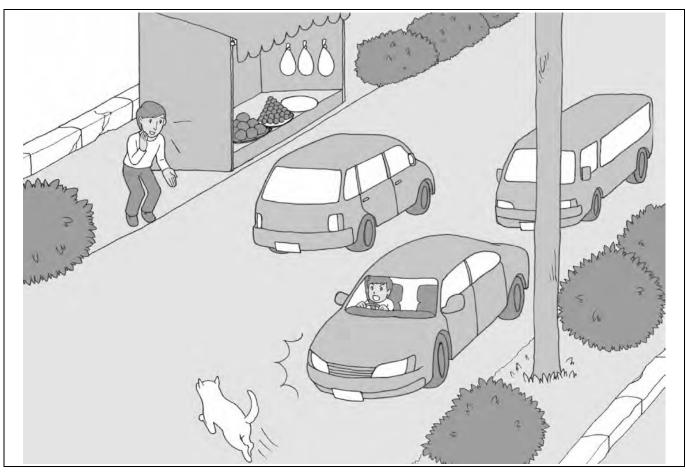
### The truck hit the child who couldn't escape.



<note></note>		

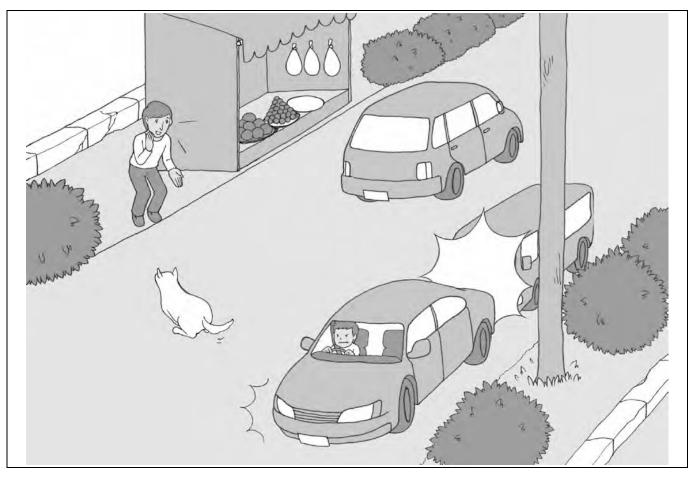
# A van is running behind the car very closely, suddenly a dog comes out...





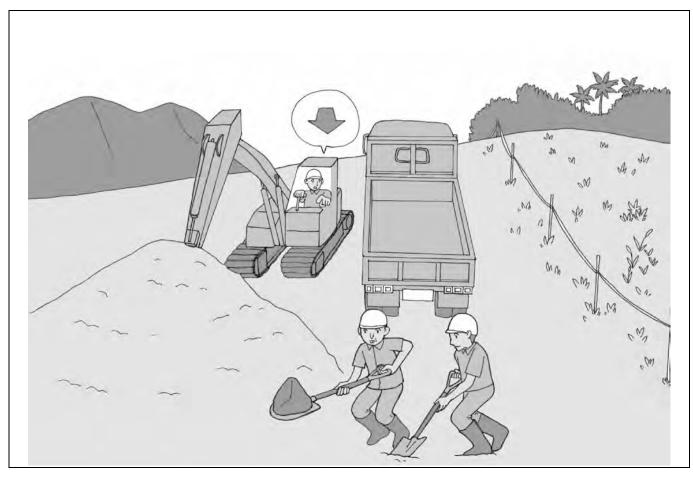
NOTE >	

# The van crashed into the front car that stopped suddenly.



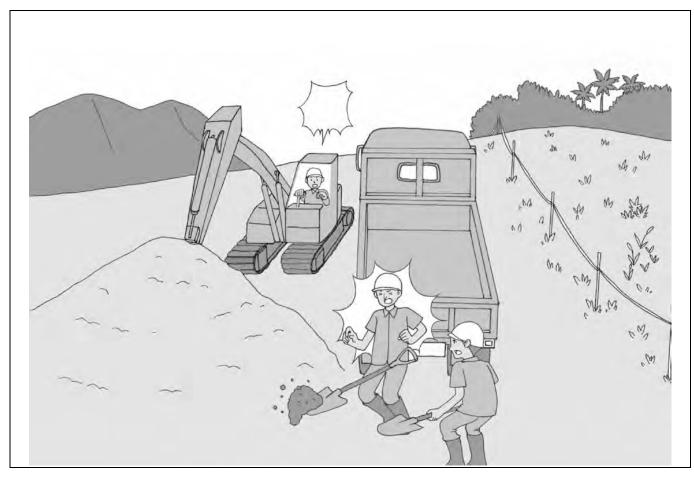
< NOTE >	

#### Dump truck is going back without checking back side...



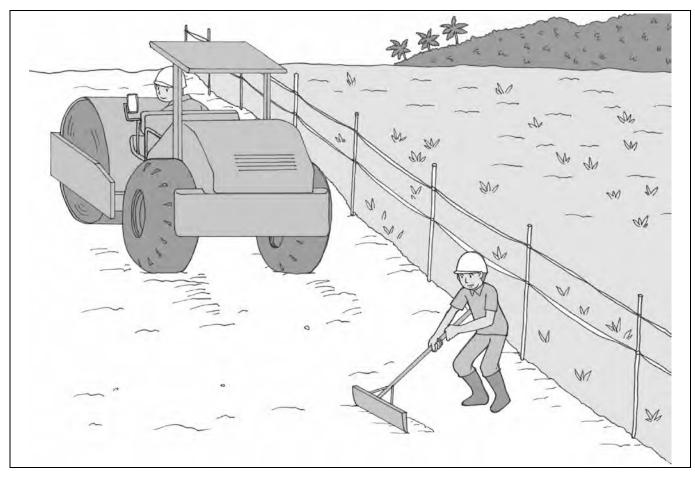
< NOTE >			
	***************************************	 	
***************************************	***************************************	 	

### Case8 The truck hit the worker.



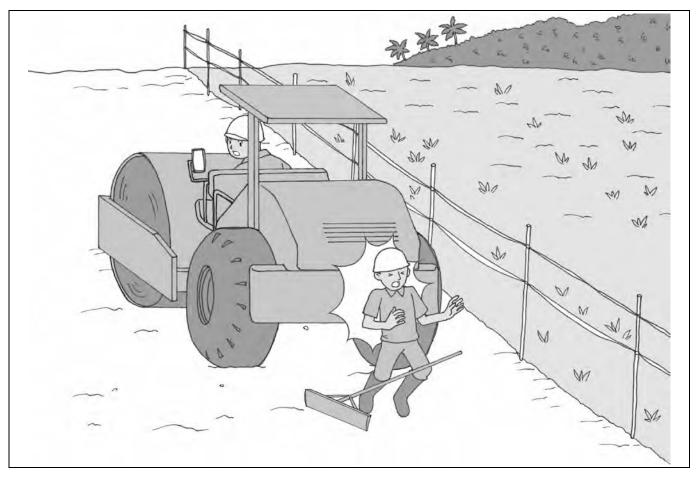
< NOTE >		
***************************************	 	
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#### Both men are out of sight with each other...



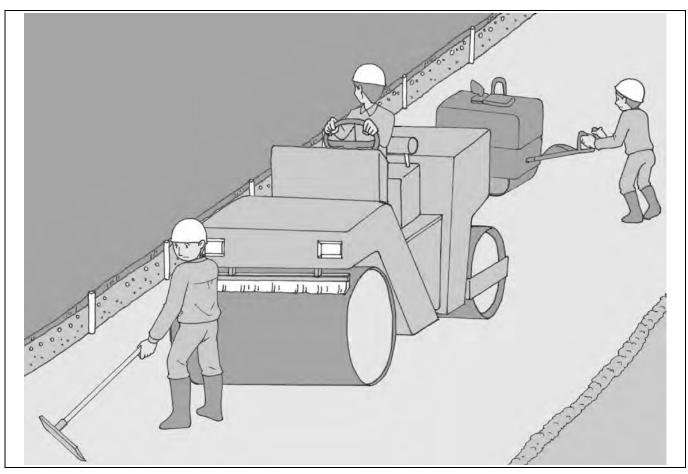
< NOTE >

#### Going back rubber-tired roller hit the worker.



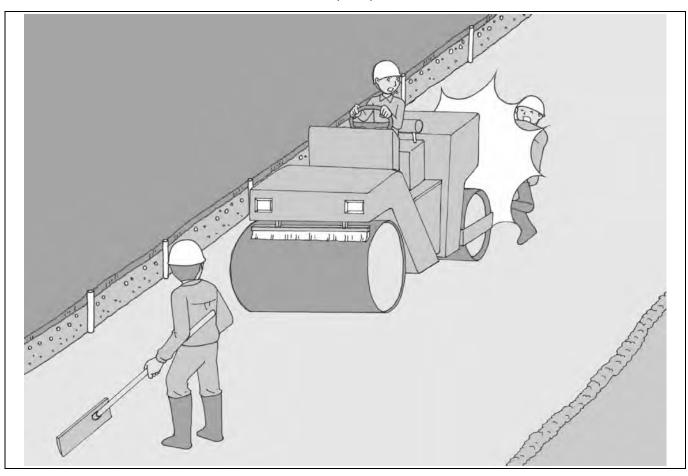
INOTE >	
	<u>.</u>

### Case 10 At the nighttime work, in poor lighting surroundings...



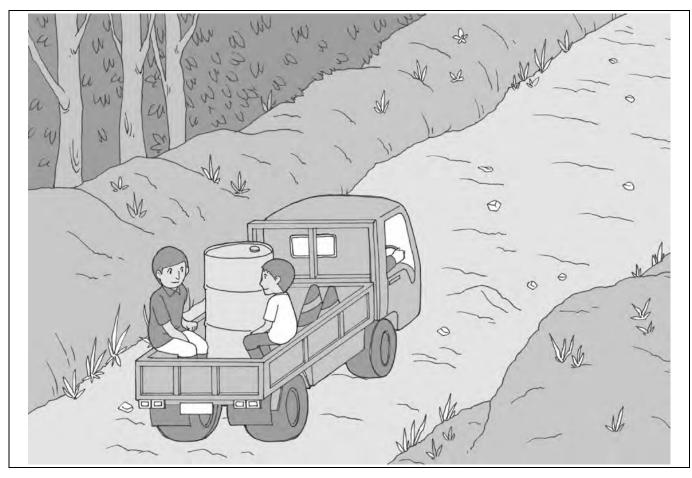
<note></note>	

### Case 10 Road roller hit a worker.



< NOTE >

#### Workers are riding on the back of a truck.



NOTE >	

#### A worker fell down to the ground.



(NOTE)

In a rainy day, ground is squidgy, slope is partially collapsing...



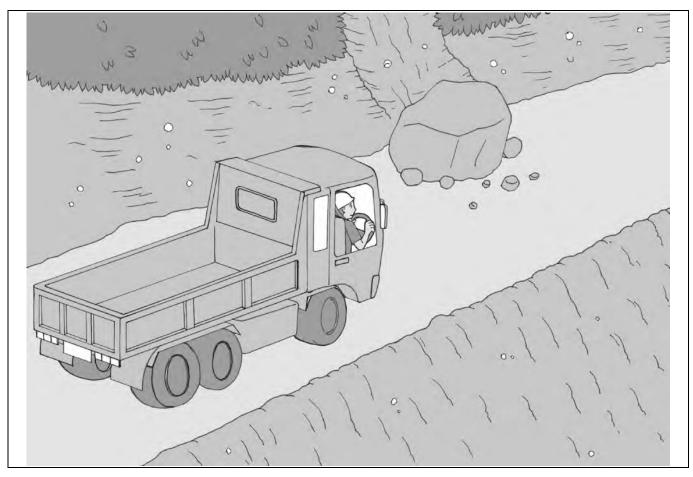
< NOTE >	

### Case 12 Bulldozer fell down the slope.



< NOTE >		

Road is partially blocked by the fallen rocks, if the truck detours, it will take a long time...



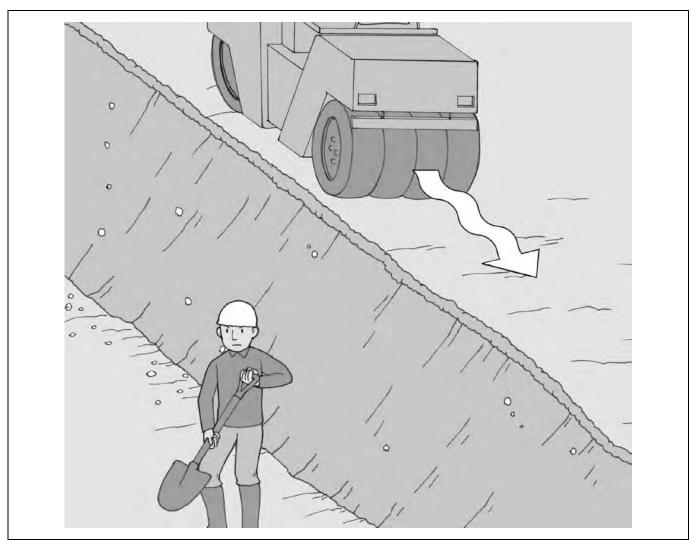
< NOTE >	

#### Case 13 The truck fell down the cliff.



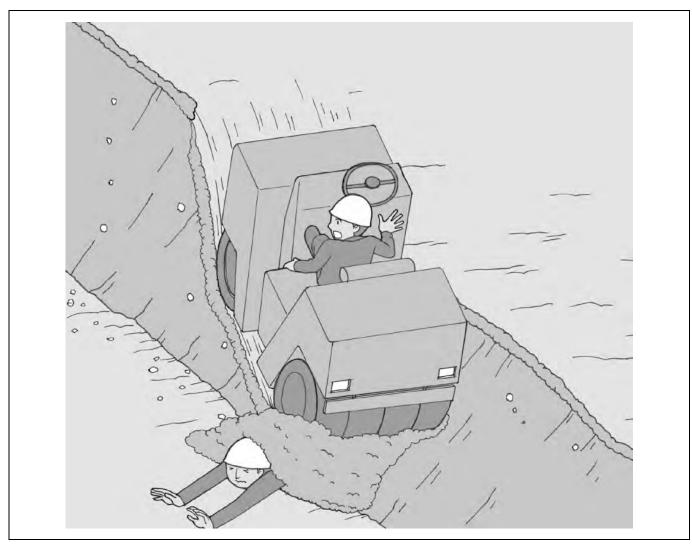
< NOTE >	

Road roller is coming backward but driver is not looking at the rear side.



< NOTE >			
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			188188888888888888888888888888888888888

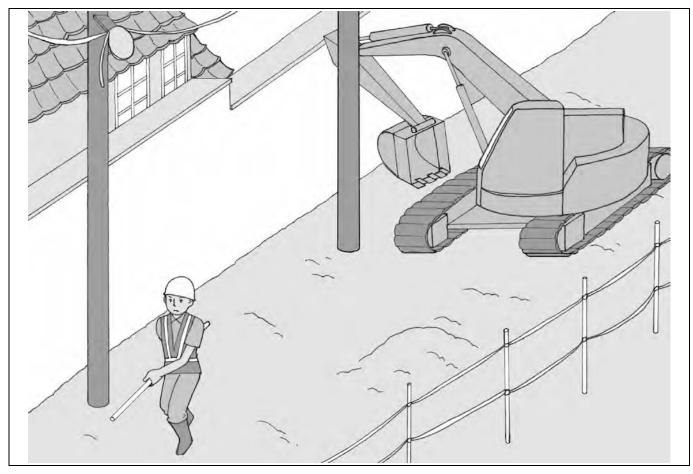
### Case14 The roller fell down.



< NOTE >		
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		 **************************************

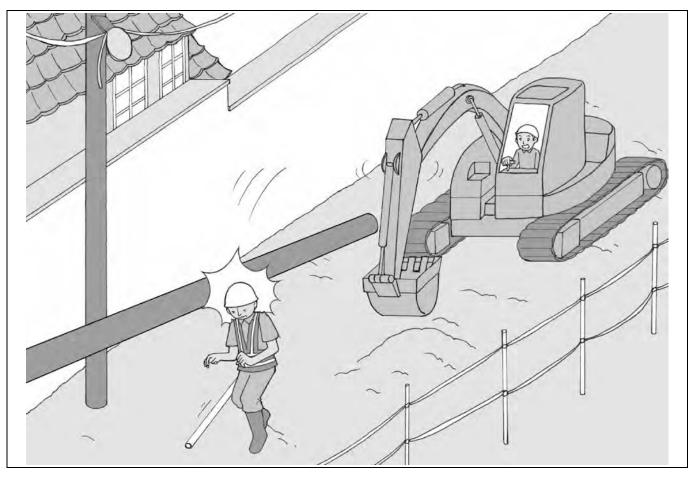
### Case 15 Power shovel is operating close to the telephone pole...





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# The shovel hit and turn down the pole and a worker was injured.



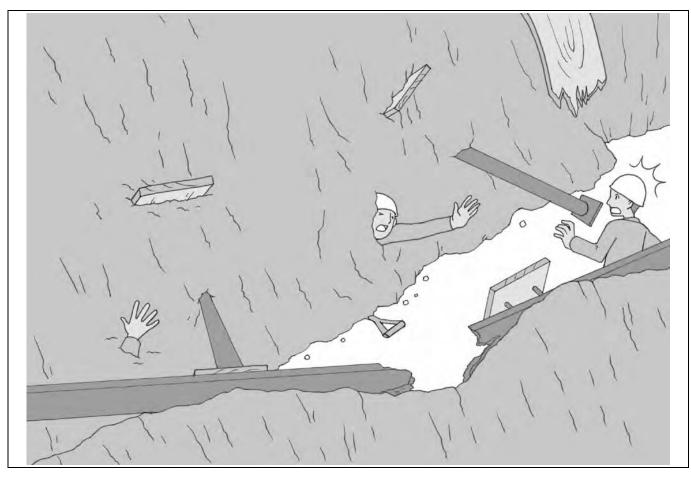
<note></note>	

### Case 16 Earth retaining is not enough and partially collapsing...



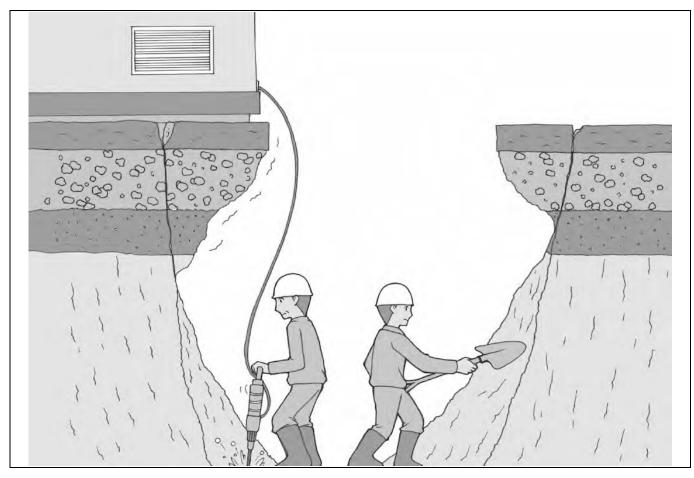
<note></note>	

### Case 16 Workers were buried alive by the mudslide.



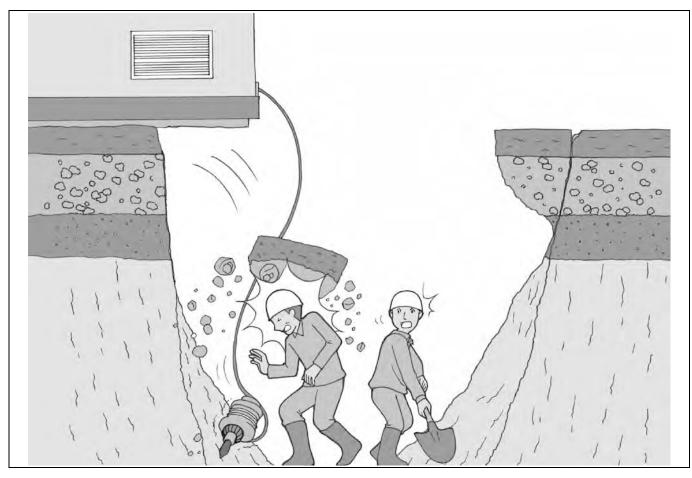
<note></note>

#### Case 17 Overhead asphalt pavement is on the brink of collapse...



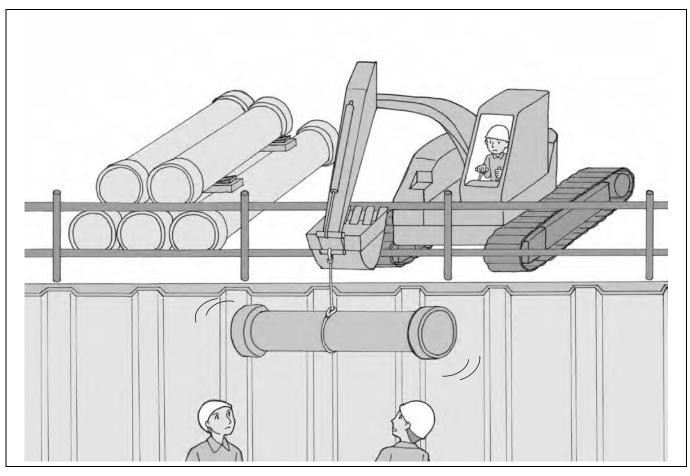
< NOTE >	
	1811881188181881818181818181818181818181
	#100018018018018081808180881808818081808

### Case 17 Asphalt block fell onto worker's head.



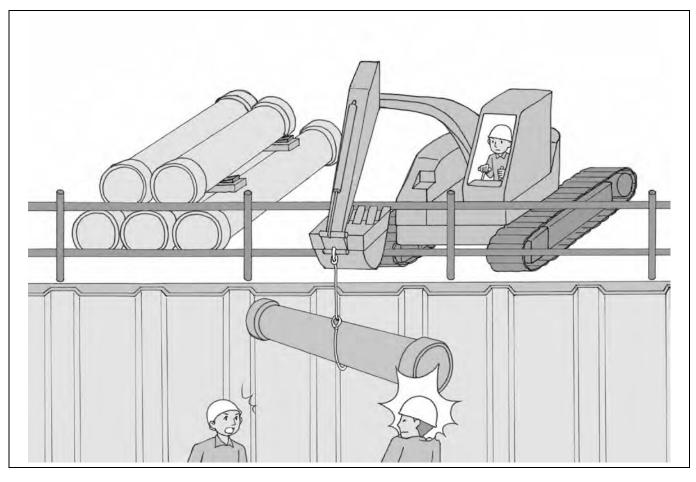
<note></note>		
		***************************************
		**************************************
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## Case 18 Hanging material is swaying...



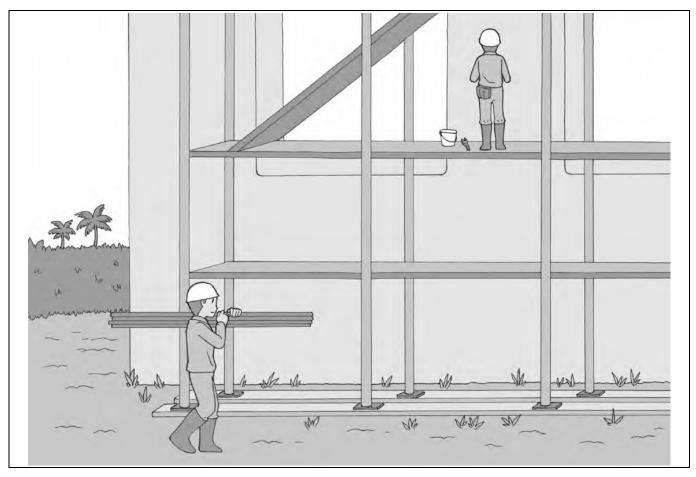
< NOTE >

## Case 18 Hanged material fell down and hit a worker.



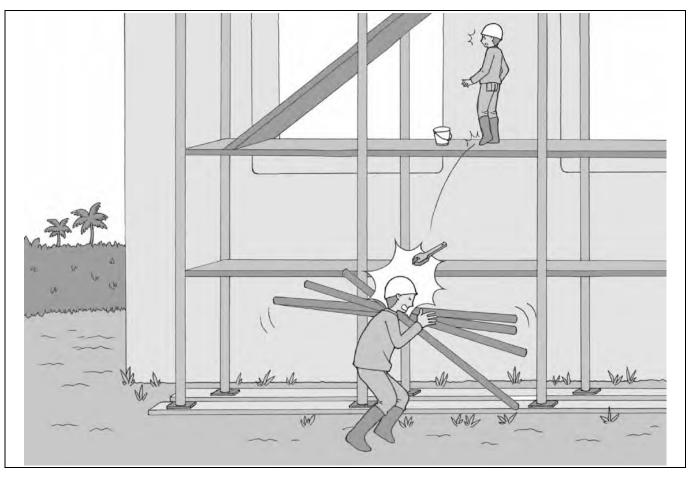
< NOTE >

## Case 19 A spanner is placed on the high altitude floor...



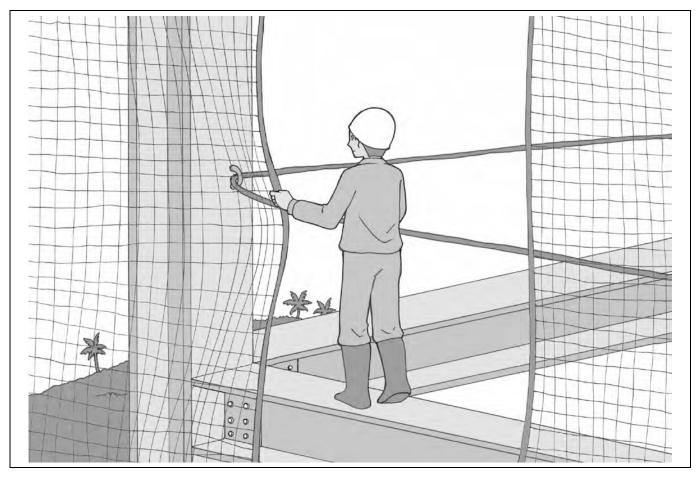
< NOTE >	

## Case 19 The spanner fell down and hit a worker on the ground.



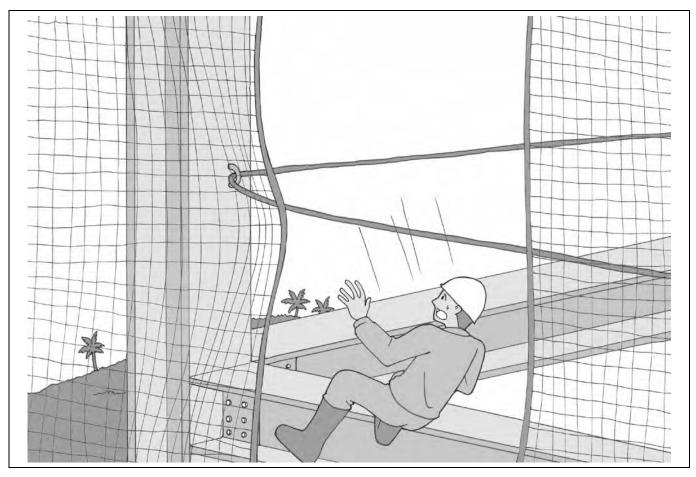
<note></note>	

A worker is closing the net in high place without wearing safety belt...



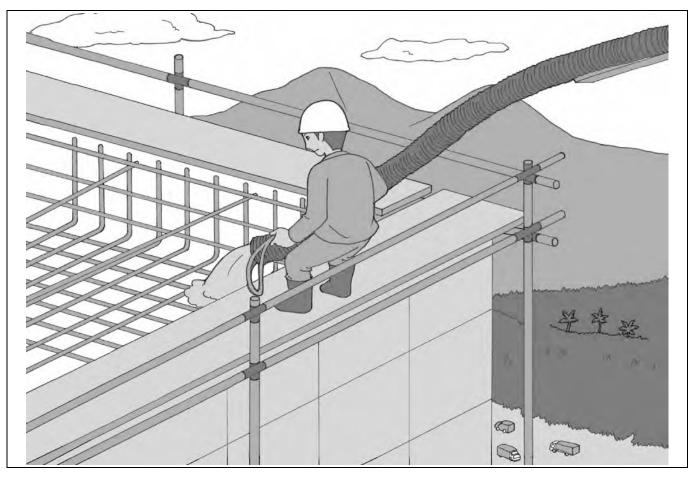
< NOTE >	 	

## Case 20 Losing a balance, the worker fell down to the ground.



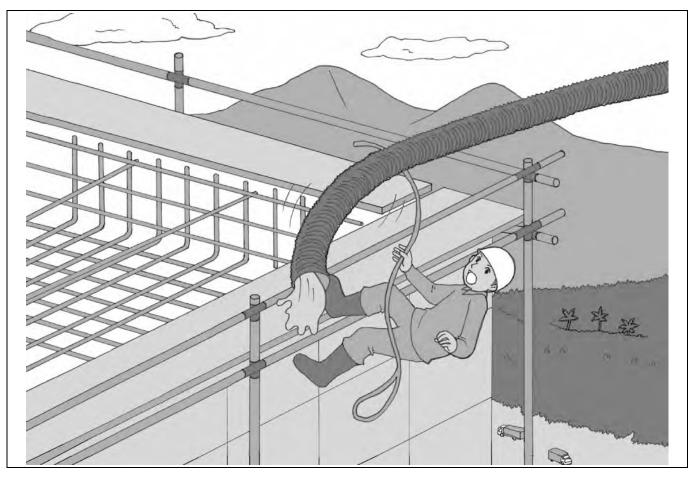
< NUIE >	

## Case21 A worker is doing concrete placement at high-place.



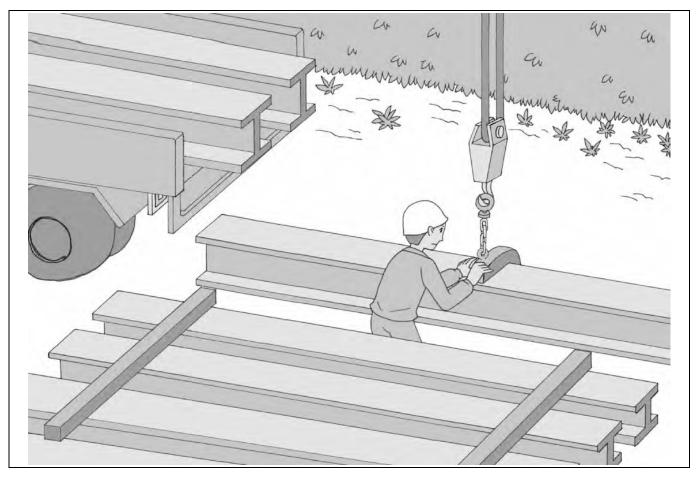
INOTE >

# The worker fell down to the ground by the back action of the flexible tube.



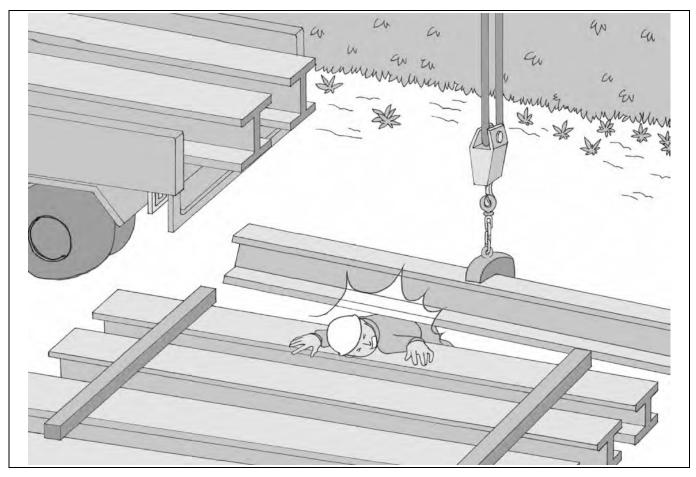
NOTE >	

## Case 22 Are you all right working on this place?



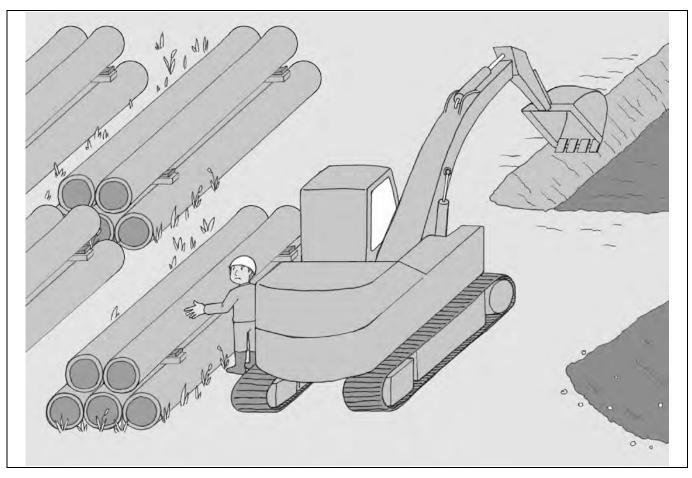
<note></note>	

The worker was caught between the hanged material and temporary placed steel plate.



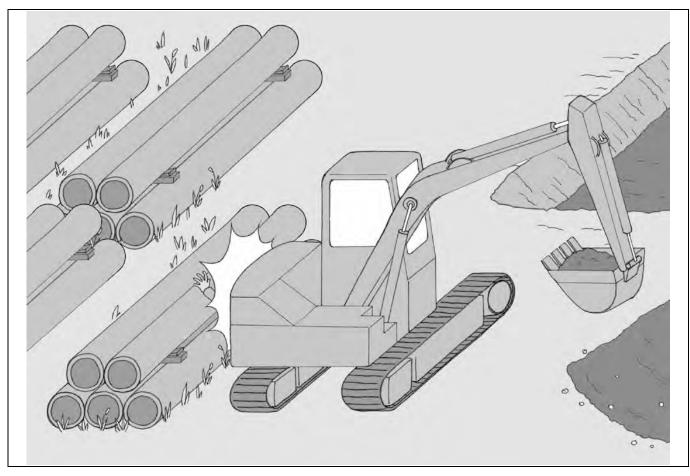
< NOTE >			
		***************************************	
		***************************************	
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## Case 23 Isn't it dangerous to pass through there...?



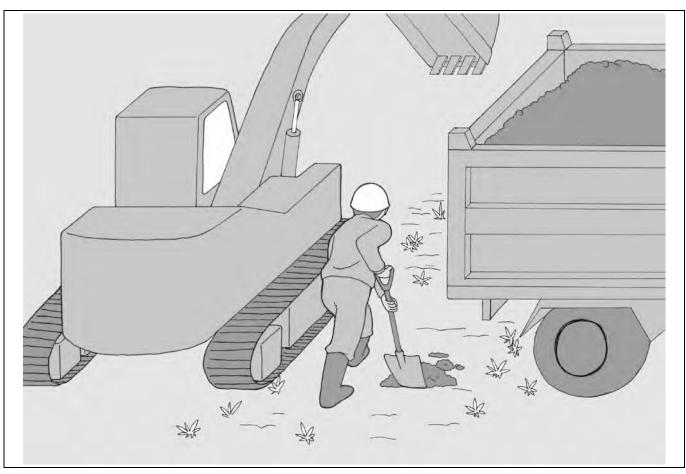
<note></note>		

# The worker was caught between the backhoe and the temporary placed piping materials.



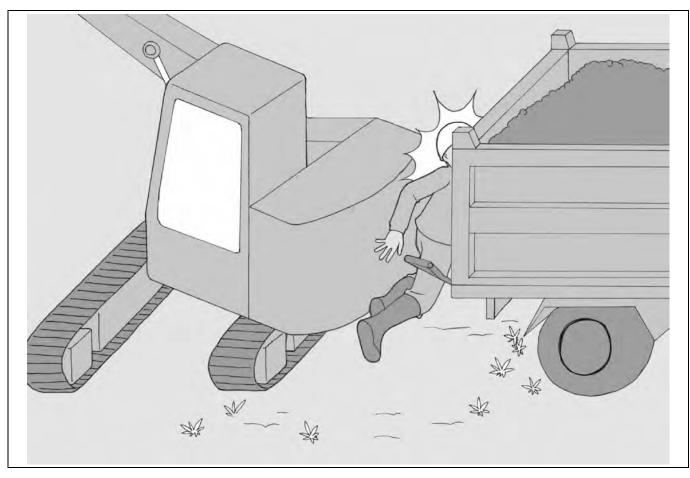
< NOTE >		

## Case24 Isn't it dangerous to work there...?



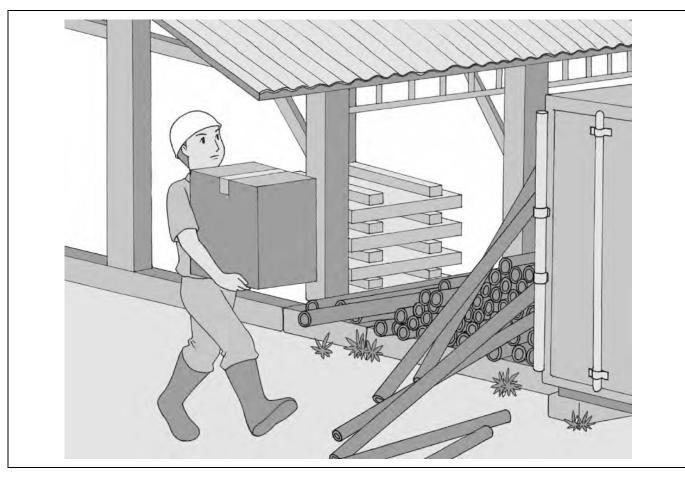
< NOTE >

The worker was caught between the backhoe and the dump truck.



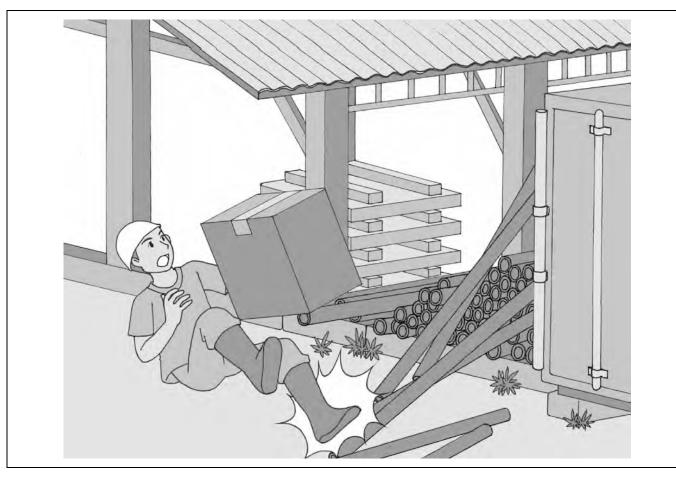
< NOTE >		
		 ***************************************

# You are carrying something. Can you see your own footsteps?



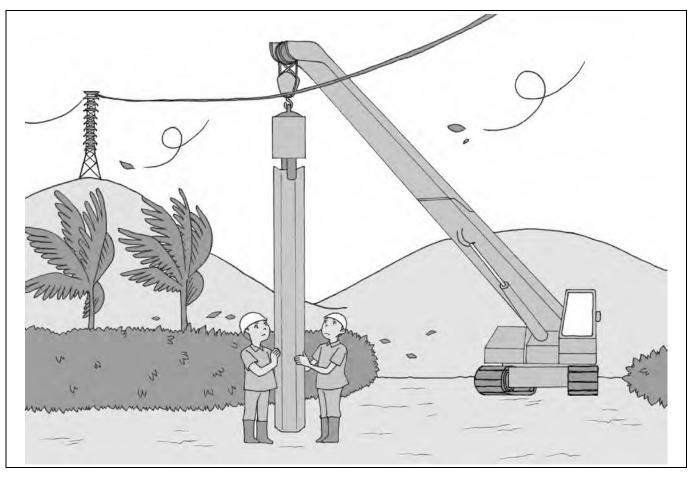
< NOTE >		
	 	***************************************

The worker was tripped by the scattered pipes and fell down.



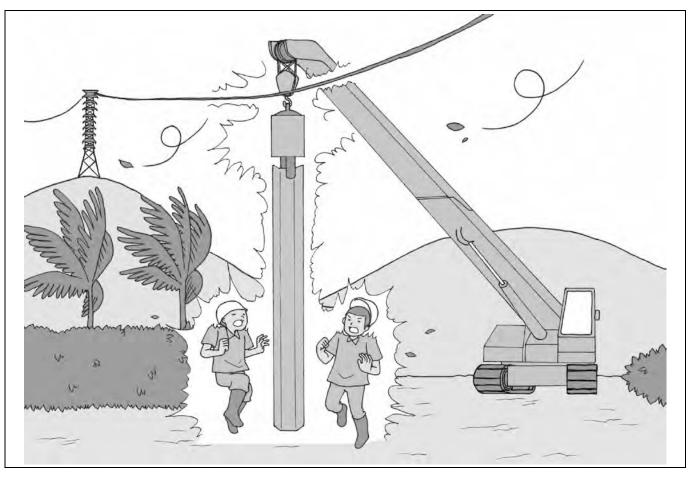
< NOTE >		

## Case 26 Strong wind is blowing, are you all right?



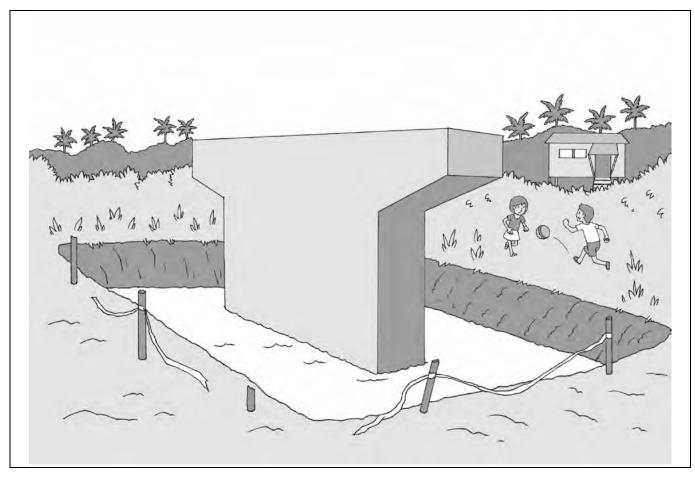
<note></note>		

The hanged material touched the high-voltage cable and workers got electric shock.



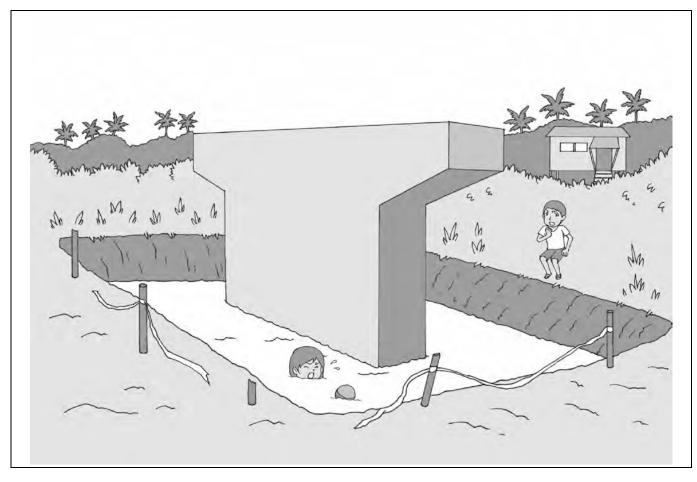
< NOTE >

# There is a deep puddle at the construction site, children are playing around it...



< NOTE >

## Case27 A child accidentally fell into the puddle and drowned.



< NOTE >	