# A Simple Embankment: Technology to Control Soil Runoff

## Key Messages
- Although it is made mainly of soil, it is very cheap, durable and easy to repair and remove.

## Planning
Plan and draw the contour lines along the river. As the location is at the most valley side of land near the river, soil accumulation will be convenient.

## Preparing Materials
Prepare the required materials with appropriate quantity as shown in the figure above.

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil</td>
<td>2.0 L</td>
</tr>
<tr>
<td>Sand</td>
<td>1.0 L</td>
</tr>
<tr>
<td>Plant ash/Lime</td>
<td>1.0 L</td>
</tr>
<tr>
<td>Plant residue</td>
<td>20-50 g</td>
</tr>
</tbody>
</table>

## Mixing
Mix the materials thoroughly. Add water little by little while mixing until the soil hardens. (The water required is about 0.3L for the amount shown in 2 above)

## Molding
While squeezing the soil, make a dike with height and width of 30 to 40 cm. The size can be changed according to region.

## Construction
Build the embankment while mixing the ingredients before it gets solidified. (When lime is mixed with the soil, it starts to solidify)

## Hardening
Wait until you can no longer insert a finger to the embankment (a few weeks).

## Control
To control the amount of water upstream of the embankment, make holes in the embankment at the appropriate intervals so that they can be opened/closed with a piece of wood.

## Restoration
Repair by recoating if the embankment leaks. With more embankments installed adjacent to each and other, the suppression effect will be increased.

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