NIPPON STEEL METAL PRODUCTS CO.,LTD.

Steel Slit Dam

Deblis Flow Disaster Prevention Slit-SABO Dams



Hazard

Earthquake Land Slide Cyclone Flood Volcano

Solution Purpose

Prevention & Mitigation

Solution Theme

Infrastructure Technology Eco Infrastructure

Technology Subject

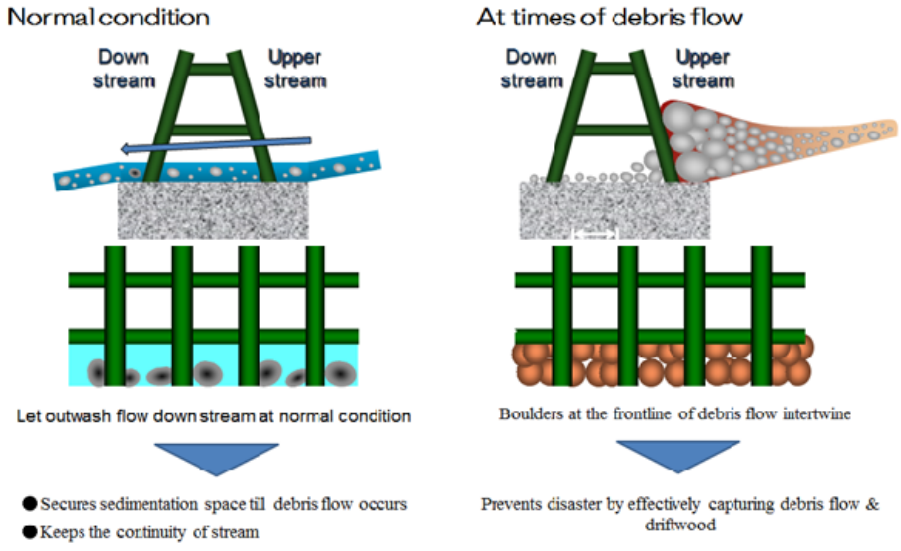
River & Basin Dam & Reservoir Sabo Ecosystem-based Infrastructure

Advantages

Steel Slit Dams are so-called "Open type" steel structure dams formed by free-standing steel sheath pipes set in a lattice pattern (Net interval of pillars and beams) with wide opening to ensure both capturing boulders & driftwood, and letting outwash flow down in normal time. Depending on the needs and conditions for each river stream and anticipated debris flow impact, a couple of types of Steel Slit Dams can be considered.

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Solution Illustrated





Background



As a recovery measure for devastated mountain resulted from either excessive deforestation or severe weather condition over years, and for sediment disaster prevention in mountain stream, those technology such as Mountain control dam "Chisan Dam" or Erosion control dam "Sabo Dam" has been developed in Japan. On top of basic function as debris flow capturing for those traditional dams, Steel Slit Dams, which has been developed in 1976, enable to preserve natural ecosystem **"through the Mountain to the Sea"** by functioning **in a time of disaster capturing a mudflow and driftwood and to protect human life,** and in normal time passing harmless sand and water from the mountains to the lower stream that makes the sea remain enriched with "ferric iron."

Exposition of the Solution

■ **Efficiently captures boulders & driftwood** when debris flow occurs and let sand, soil and water flow down at normal condition.
■ It can maintain the present slope of stream bed.
■ **It can conserve the stream and ecological system** without getting in the way of animals or fishes passing by, because of its function to secure the continuity of steam as it is.
■ **Higher capturing capacity** as compared to Closed type dam.
■ It also can easily remove captured boulders.

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Achievements of Examples



Installed in approx.1,200 sites in Japan. Approx.40 cases results in capturing driftwoods and
boulders in various debris flow over Japan, including recent Izu-Oshima's case in 2013.
It was also adopted and installed overseas such application example as in Philippines (Ormoc,
Leyte Island in 1998) or in Taiwan (near Taichung city), where natural disasters frequently occured,
and they both perfectly performed capturing result after hit by a couple of typhoon in the region including
the large typhoon in 2013.

Corporate Profile

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