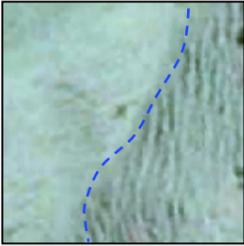
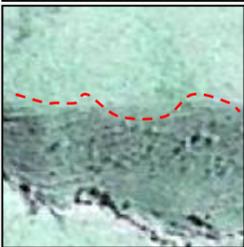
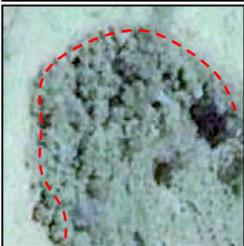
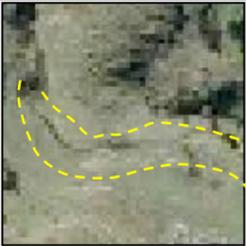
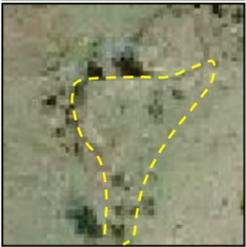
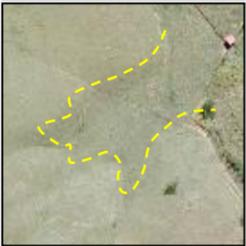
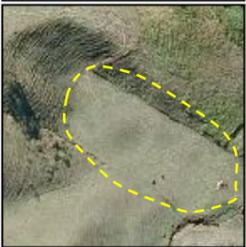
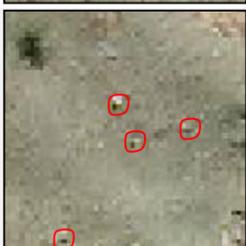
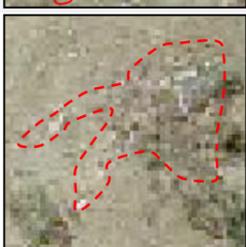
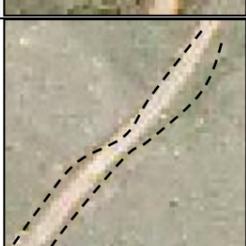


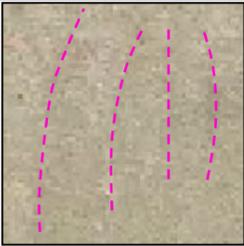
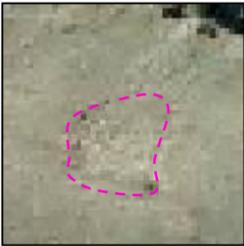
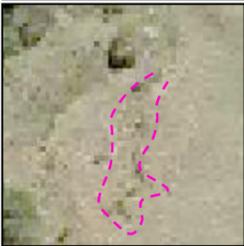
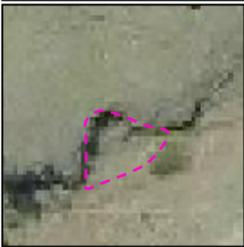
APPENDIX I: Interpretation Keys for Geomorphodynamics Maps

	Nomenclature	Vertical Image*	Definition / Interpretation Keys
HYDROGRAPHY	Perennial stream		Stream interpreted from evidence of perennity: visible water sheet, visible channel incision, topographic position, V-shaped valley bottom or plain.
	Non-perennial stream		Intermittent or temporary watercourse marked in the thalweg of well-defined concavities, commonly a gentle concave valley. In these areas, the water flow axis is visible in the image through darker coloring or the difference in shading between opposite slopes. In some cases, a light-colored channel is observed, formed by the denudation of alluvial-colluvial material during a heavy rainfall event.
	Paleochannel		Abandoned channel in favor of water flow in a different position. Occurs in study areas after heavy rainfall events that mobilized sediments, blocking the channel in plains, alluvial fans, or debris cones.
	Lake		Perennial water body associated with anthropogenic dams along watercourses.
DENUDATIONAL LANDFORMS	Drainage divide		Main water divide of the studied watersheds.
	Saddle		Lowered area between two elevated surfaces in interfluves.
	Convex slope break		Topographic break between a flatter top or slope above and a steeper slope below. In study areas, they appear at the boundaries of some summits, along the sides of deeply incised valleys, or on colluvial terraces downstream of erosive amphitheatres. Specific types of convex rupture, such as erosive amphitheatres, have been mapped distinctly.
	Amphitheater-shaped valley head		Semicircular or amphitheater-shaped reentrance, often associated with drainage headwaters. Composed of concave slopes in profile and plan, favoring surface and subsurface water concentration.
	Secondary amphitheater-shaped hollow		Smaller amphitheater-shaped reentrance, typically found on valley sides. May be old scarps from landslides that have been softened.
	Valley floor scarp (riverbank)		Rupture in valley bottom, composed of a steeper slope separating two gentler slopes above and below. Commonly associated with erosive margins of confined or partially confined channels.

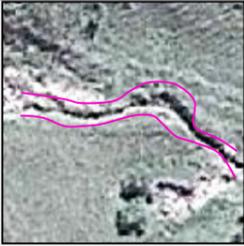
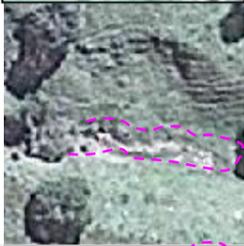
* Scale approximately 1:1,500 or ** 1:4,000 as indicated in the nomenclature. The symbols are only indicative of the location of the mapped features and do not correspond to the symbols used in the map legend.

	Nomenclature	Vertical Image*	Definition / Interpretation Keys
DEPOSITIONAL LANDFORMS	Alluvial plain		Flat surface at the bottom of a valley, predominantly formed by the accumulation of alluvial sediments.
	Alluvial terrace		Flat or slightly inclined surface located at a topographically higher position relative to the current alluvial plain, corresponding to the remnants of a former alluvial plain.
	Alluvial fan**		Moderately inclined feature formed by sediment accumulation at the base of slopes in break zones between valleys and flatter areas.
	Debris cone**		Cone-shaped feature formed by coarse sediment accumulation at break zones between steeper valleys and flatter or less confined areas.
	Colluvial slope**		Moderately inclined feature downstream of erosive amphitheaters, formed by colluvial sediment accumulation. It has a convex shape in plan and presents roughness along the profile.
ROCK EROSION FEATURES	Block Field (tor, nubbin, castle koppie)		Protruding surface consisting of outcropping fractured rock or superimposed boulders.
	Boulder		Individual rock block. It can be formed in situ or transported. The limit for individualizing a block is approximately 1.5 m in diameter.
	Rock sheet		Exposed rock area on a slope.
	Rock rapid in channel		Exposed rock area in a channel, interpreted broadly as bedrock reaches, which may include knickpoints or more continuous bedrock sections. Channels where the mapped events are thought to have significantly influenced channel scouring have been categorized separately.
HUMAN INFRASTRUCTURE	Roads or paths		Roads and paths that alter the slope geometry through cuts and embankments.
	Buildings		Houses, barns, etc.

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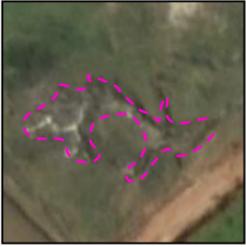
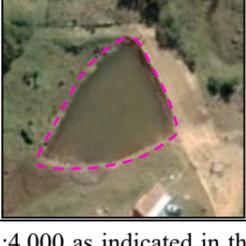
	Nomenclature	Vertical Image*	Definition / Interpretation Keys
PRETERITE MORPHODYNAMICS	Rill		Linear feature in the direction of the slope inclination. They typically occur in groups. Some are stabilized, while others show exposed soil at the thalweg indicating activity.
	Terracette		Surface features parallel to contour lines (perpendicular to the slope), forming parallel or interwoven networks on steeper slopes, often associated with cattle trampling but not exclusively
	Landslide scar		Old landslide identified by a gently concave head (crown), breaks on the lateral boundaries, and a bottom with sparser vegetation compared to the surroundings.
	Inactive linear erosive features		Features with irregular, elongated contours, often with branching (arborescent) patterns. This category includes both gullies and erosive forms such as ravines, which are currently stabilized or inactive.
	Bank erosion		Riverbanks or nearby areas with marked slope breaks characterized by concave contours indicating erosion or undercutting. Some of these features may be scars from old rotational landslides.
MORPHODYNAMICS OF THE 2009/2010 EVENT	Translational landslide (rollover type)		Landslide identified in early 2010 images. It has a gently concave head (crown) and rounded lateral contours, a bottom with exposed soil, and frequent linear features in the upstream-downstream direction, probably related to water flow within the scar or the dragging of larger particles during the landslide trigger. Area $\leq 141.3 \text{ m}^2$.
	Translational landslide (tail type)		Landslide identified in early 2010 images. It has a gently concave head (crown) and rounded lateral contours, a bottom with exposed soil, and frequent linear features in the upstream-downstream direction, probably related to water flow within the scar or the dragging of larger particles during the landslide trigger. Area $> 141.3 \text{ m}^2$.
	Slump		Landslide with deep head and lateral contours (greater shading). The downstream portion of the feature appears elevated relative to the upstream portion.
	Runout area of the landslide		Runout area downstream of translational landslide scars. It has straight lateral contours and a texture similar to the landslides.
	Road slope failure		Failures with an exposed soil bottom and varied contours associated with road embankments and paths. They can be small landslides or features of remnant erosion.
	Channel scoured by debris flow		Channel identified in early 2010 images in areas where no incision signs were visible in previous images. It has narrow, generally continuous contours extending for dozens of meters. It shows a smooth, white texture indicating recent exposure of soil or rock, and sometimes a shaded contour near the thalweg.

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Nomenclature	Vertical Image*	Definition / Interpretation Keys
Channel reshaped by debris flow or fluvial incision		Channel identified in early 2010 images in areas where signs of incision were already visible in previous images. It has narrow, generally continuous contours extending for dozens of meters, with a smooth, white texture indicating recent exposure of soil or rock, and sometimes a shaded contour near the thalweg. This channel may reflect reshaping by debris flows or floods, or incision into pre-existing sediment-filled valleys.
Landslide deposit*		Smooth or slightly rough texture, with varied colors when different materials (boulders or vegetation remnants) are deposited downstream from landslides and runout areas. It widens downstream.
Road slope failure deposit		Deposits with varied forms and smooth or slightly rough texture downstream of embankment failures.
In-channel or levee debris flow deposit		Deposition area within the channels or along their sides (often in the form of debris dikes or levees) attributed to debris flows. They appear in images with a whitish color and, when primarily composed of coarse sediments, a rough texture. The rough texture was the main criterion for differentiating between denudation areas and deposition areas within the channels. In the case of lateral dikes, they have elongated forms bordering the channels.
Debris flow lobe		Deposits formed in debris cones downstream of confined valleys. They have contours in the shape of fans or lobes with a sharp increase in width downstream. They have a rough texture.
Coarse mixed deposit		Deposit predominantly composed of coarse sediments inside channels. Boulders may be concentrated or more dispersed along the channel.
Medium mixed deposit		Deposits occurring in debris cones downstream of debris lobes or channels denuded by debris flow or debris flood. They appear as rough-textured fans, with coarse sediments more dispersed than in debris lobes or fans.
Fine-grained mixed deposit		Deposits in channels or fans with a grayish color, possibly associated with fine sediments transported in suspension, having a smooth texture with flow direction lineations. May contain areas of rougher texture if larger clasts are present.
Fine-grained flood deposit		Smooth-textured, white-colored deposits on convex riverbanks, indicating sediment deposition in the form of bars.

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POST-2010 MORPHODYNAMICS AND ANTHROPOGENIC CHANGES

Nomenclature	Vertical Image*	Definition / Interpretation Keys
Landslide		Landslide identified in images after 2010. It has a gently concave head (crown) and rounded lateral contours, a bottom with exposed soil, and frequent linear features in the upstream-downstream direction, probably related to water flow within the scar or dragging of larger particles during the landslide trigger.
Active linear erosive feature		Active gully or ravine. It has irregular, elongated contours (often with an arborescent shape).
Road slope failure		Failures with an exposed soil bottom and varied contours associated with road embankments and paths. They can be small landslides or features of remnant erosion.
Landslide deposit		Smooth or slightly rough texture, with varied colors when different materials (boulders or vegetation remnants) are deposited downstream from landslides and runout areas. It widens downstream.
Road slope failure deposit		Deposits with varied forms and smooth or slightly rough texture downstream of embankment failures.
Undifferentiated deposit		Varied deposits found in fans and floodplains where the triggering process could not be clearly identified.
Artificial lake		Perennial water body associated with anthropogenic dams along watercourses.

* Scale approximately 1:1,500 or ** 1:4,000 as indicated in the nomenclature. The symbols are only indicative of the location of the mapped features and do not correspond to the symbols used in the map legend.