

GULLIES IN SÃO PAULO STATE, BRAZIL

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In São Paulo State it can be distinguished two important types of gullies (linear erosion), related to the evolution of dynamic processes: a) in the west of São Paulo State (Planalto Ocidental), gullies just develop and spread out only in the rain season. This is due to the characteristics of the soils (sandy, too much permeable, and not so deep). After the removal of the first horizons of the soil the underground water is easily reached and the erosion process is accentuated. During the drought season, water volume is low and the level of subsurface water goes down as well, so the piping action is inhibited and sediment yield is diminished. The evolution of erosion processes is seasonal and accelerated by human changes in the environment. The shape of the gullies are generally extended, branched out, like long stream courses. b) in the central part of the state (Depressão Periférica) soil profiles are generally very deep, inducing the development of large and deep gullies. The subsurface water volume remains in the bed of the gully during whole year. The evolution process is continuous and slow. The gullies on head streams seem like amphitheatres. Another important process which occurs in the eastern part of São Paulo state is related do landslides (Planalto Atlântico). These erosion processes are different from those in the west and central part of the state. They can be observed in high slopes, without vegetation cover or placed by slums or sometimes urban areas.