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Abstract : The consequences of very active erosion in regions with semiarid climates, like the countries of North Africa, are the premature siltation of dams and soil losses on farmland that can have serious repercussions on the reduction of soil productivity. These problems directly impact water availability and food security to ensure sustainable socio-economic development. The objective of this chapter is to describe the problem of erosion and sedimentation of dams as well as the origin and sedimentary composition of the vase accumulated in the lake of a dam. In fact, a vase is usually composed of three classes: sands, silt, and clays. Solid particles constituting sediment deposits may be of natural or anthropic origin. In addition, sediment in a dam can have several origins: a climate with strong and aggressive precipitation characterized by very high kinetic energy, low vegetation cover, easily mobilizable movable soils, topography favorable to runoff accelerating the displacement of mobilized materials, strong demographic pressure, massive clearing of wooded areas, fires and overgrazing, and inappropriate cropping techniques. Finally, many ways are being implemented to combat this phenomenon that has become widespread in all the regions of the world, such as the elevation of dams, dredging, and the evacuation of sediment as it arrives. Other techniques have been introduced recently (re-vegetabilization, micro-dams, etc.) in order to cope with this phenomenon and weaken its magnitude to reduce the water losses in dams and increase their storage capacity as well as the protection of farmland.

KEYWORDS : Erosion ; Semiarid climates ; North Africa

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