The problems we face are growing at a pace that challenges our ability to solve them:
- Soil loss results in physical, chemical, and biological degradation and loss of ability to produce food.
- Land slides, unstable slopes and flooding destroy agricultural land and valuable infrastructure.
- Siltation of drains, lakes, reservoirs, and rivers reduces storage capacity and can result in flooding.
- Overuse and misuse of large areas of land, and contamination by toxic runoff from mine dumps, landfills, feedlots, salinization, etc., require extensive reclamation programs.
- Water polluted by mineral or organic sediments as well as the pollutants mentioned above detrimentally affect drinking water supplies, fresh and saltwater fisheries, and coral reefs.
- Decreased groundwater recharge in watersheds results in local water shortages.
- Off-farm - VS plays a vital role in watershed protection - slowing down and spreading rainfall runoff, recharging groundwater, reducing siltation of drainage systems and water bodies, and increasing groundwater recharge.
- On-farm - VS protects structures such as roads, ponds, drains, canals and building sites. Also used for land and gully rehabilitation.
- Hedges are propagated and established vegetatively. DNA tests show that recommended varieties are nonsterile. The plant stays where planted; as for example the decades old hedges in Gundarpeta, India.
- Closely planted slips grow into dense hedgerows with a deep, tough root system. They can withstand inundation, and effectively reduce flow velocities, forming excellent filters that prevent soil loss.
- Ponds, drains, canals and building sites. Also used for land and gully rehabilitation.
- Vetiver is used to trap sediments, control runoff, recharging groundwater, reducing siltation of drainage systems and water bodies, and increasing groundwater recharge.

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The Vetiver System (VS):
- Consists of a simple vegetative barrier (a hedge) comprising upright, rigid, dense, and deeply-rooted clump grass, that slows runoff, allowing sediments to stay on site, eventually forming natural terraces.
- Vetiver grass is already found in more than 120 countries throughout the tropics and subtropics.
- It has been used for more than a century in many Asian, African, and Caribbean countries as a traditional "soil binding" technology.
- Today, the VS is used for soil and moisture conservation, bioengineering, and for bioremediation.

It is not weedy or invasive:
- Hedges are propagated and established vegetatively. DNA tests show that recommended varieties are nonsterile. The plant stays where planted; as for example the decades old hedges in Gundarpeta, India.
- Closely planted slips grow into dense hedgerows with a deep, tough root system. They can withstand inundation, and effectively reduce flow velocities, forming excellent filters that prevent soil loss.

Deep, tough roots:
- Vetiver's deep, massive fibrous root system can reach down to two to three meters in the first year.
- This massive root system is likened to "living nails", binding the soil together.
- The measured maximum resistance of Vetiver roots in soils is equivalent to one-sixth that of mild steel (75 Mpa); stronger than most tree roots.
- The fibrous mat of roots strengthens earthen structures and removes many contaminants from soil and soil water.

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