

Vetiver System for Landfill Leachate Seepage Control in Australia



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Brisbane: Leachate after rain on the side slope of an old landfill at Judy Holt Park, Wellington Point, Redland Shire



This leachate runoff is highly contaminated with Chromium, Cadmium, Copper, Lead and Zinc. It will eventually run into a nearby creek



Another seepage at the same landfill, this leachate was running into a drain



Top view of the vetiver planting at the outlet of the leachate



**A thick stand of vetiver was planted at the outlet
of the leachate seepage**



Three months after planting, good growth, no adverse effects



Ten months after planting, leachate volume was significantly reduced



Twelve months after planting, excellent growth, unaffected by heavy metals contamination in the leachate.



Within a year vetiver has completely stopped the leachate seepage



Armidale: Vetiver planted to control landfill seepage. Note the leachate on the drain when native grass was used.





**Leachate runoff from
the landfill mound
under native vegetation**

Replacing native grass with Vetiver to control landfill seepage.



Luxurious growth, no toxic effects, six months after planting.



Seven months after planting, note the leachate pool has mostly dried up



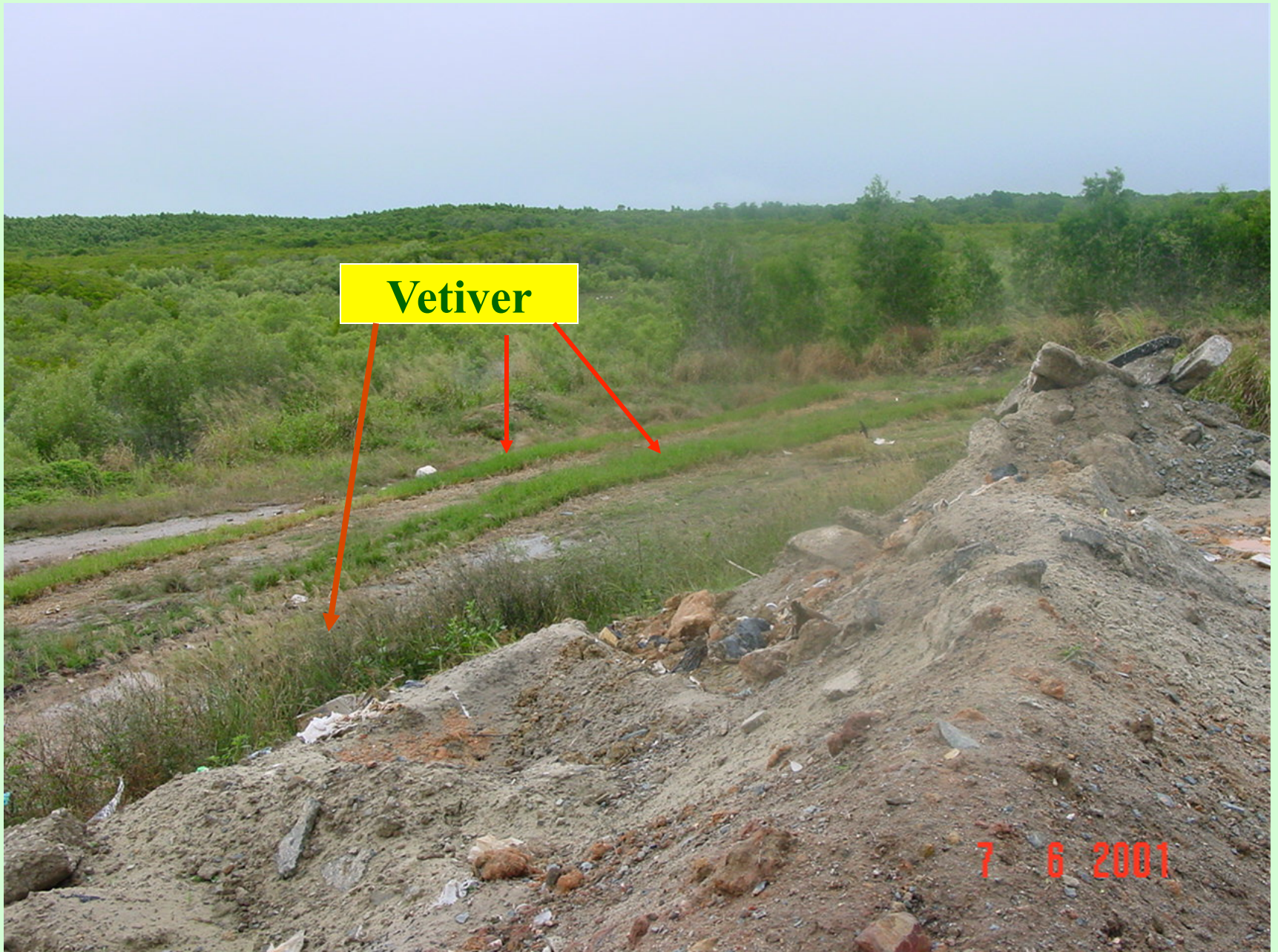
One year after planting, the leachate pool was completely dried up.



Port Douglas: Bands of vetiver planted to control leachate at Port Douglas Landfill



Looking down from the top of the dump



Vetiver

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**Occasional
mowing to
encourage new
growth and
remove
nutrients**

**THANK
YOU**