An Afghan designer has developed a wind-powered device that could substantially lower the risk to human life and financial cost of clearing landmines.

The Mine Kafon was created by Massoud Hassani, who is based at the Design Academy Eindhoven, The Netherlands.

Built out of inexpensive, prefabricated materials, the device consists of a heavy plastic core containing a GPS (global positioning system) tracker, which is attached to bamboo sticks with plastic feet at each end that enable it to walk.

All it needs is a windy day to move across a minefield, Hassani explained.

If it hits a mine, [the mine] will explode, said Hassani, adding that if the device is damaged or destroyed, the cost of repairing or replacing it is far lower than traditional mine clearing approaches.
One Mine Kafon costs US$40, which is a lot less than the US$1,000 currently spent on removing a single mine, he said.

The onboard GPS means the device can map areas that have been cleared of mines.

The Mine Kafon has been nominated for a Design of the Year award at the Design Museum in London, United Kingdom.

Hassani has had his device tested free of charge by the Dutch Ministry of Defense, which found it was not without flaws.

Hans van der Slik, commanding officer at the school for Explosive Ordinance Disposal which worked with Hassani during testing, said the current design is not suitable for actual mine removal. The United Nations requires a 98 per cent clearance of affected areas, and to reach that other techniques are more reliable.

However, I can see a role for the Mine Kafon as a scouting tool, van der Slik added, to see if a suspected area is indeed a mine field.

He has discussed necessary alterations with Hassani, who is now working on a second version.
The details are confidential, but are expected to make the device more steady and able to systematically cover a suspect area, rather than relying on wind direction.

It has potential for landmine identification and clearing operations, according to Tamar Gabelnick, policy director for the International Campaign to Ban Landmines (ICBL), a global network based in Geneva, Switzerland.

Gabelnick said an estimated 70 million mines are planted around the world, with the majority in Afghanistan, Angola, Cambodia and Iraq.

What the ICBL and our members, many of whom are humanitarian mine clearance organisations, are focused on is not the financial cost of clearing landmines but the humanitarian and socio-economic cost of not clearing them, Gabelnick said.

We welcome research and development into clearance, but unfortunately no new developments to date provide a magic solution.