

## **DOST's new hyacinth gizmo boasts of triple strength from former version**

Written by George Robert Valencia III, S&T Media Service, STII  
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A year after the Department of Science and Technology's (DOST) launch of a locally-fabricated gizmo that can scoop out water hyacinths from river waters, the science agency is back with a much improved version. Named "Harvester II", the water hyacinth-chomping gizmo is faster, more stable and controlled, and has better scooping and storage capacities. Overall, it has a more superior performance than its predecessor.

"The development of Harvester II shows that technology is highly dynamic and our Filipino engineers are highly capable of developing and improving machines that can be used in addressing pressing problems, such as the water hyacinth that congests our waterways," said DOST Secretary Mario G. Montejo. "Harvester II increases the government's capability to prevent disasters such as floods through local technologies."

The "High-Capacity Water Hyacinth Harvester", or "Harvester II", can collect triple its predecessor's storage capacity, or up to 12.5 cubic meters of plants and weeds. Its front conveyor system now consists of stainless steel mesh-type conveyor, with improved structure and mechanism for more efficient harvesting. All these, and the vessel's doubled speed, complete control gauges, increased stability at only 80 percent of its prototype's weight, plus improved aesthetics, complete the package that is the Harvester II.

Today, engineers from DOST's Metals Industry Research and Development Center, lead implementing agency of Harvester II, execute their final tests and modifications before its anticipated deployment this first quarter of 2013.

"Hopefully we will be able to perfect the Harvester, a machine suited to our waterways that we can reproduce and deploy soon," said DOST Secretary Mario G. Montejo.

One of DOST's High-Impact Technology Solutions (HITS), the Harvester II was developed under the "MakiBayan" or "Makina at Teknolohiya Para sa Bayan" Program, through DOST-MIRDC's collaboration with the Project Management and Engineering Design Services Office and the Metalworking Industries Association of the Philippines. The Philippine Council for Industry, Energy, and Emerging Technology Research and Development (DOST-PCIEERD) funded the project, while the Society of Naval Architects and Marine Engineers served as consultants. The Laguna Lake Development Authority, Metro Manila Development Authority, and the Local Government of Muntinlupa City also provided assistance for the project's testing phase.

Weeding out one of the world's fastest growing and most damaging plants has remained a tall task for authorities. An exceedingly prolific aquatic plant that can render bodies of water impassable, clogged, or "dead", the water hyacinth—or "water lily" to Filipinos—has invaded many of the country's rivers and waterways. Among these are the Pasig River, the Laguna Lake, and the Liguasan Marsh of Central Mindanao. Meanwhile, the invasive specie's assault is a worldwide phenomenon as other countries in Asia, America, and Africa are also plagued by the infamous plant.

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(With reports from Concesa T. Cortez, MIRDC)



**Two generations of water hyacinth collectors.** The Water Hyacinth Harvester is a DOST-fabricated machine designed to remove free-floating water hyacinths in half-meter-deep rivers and waterways. The second machine, now undergoing final tests before deployment, has improved speed, stability, controls, scooping and storage capacities, aesthetics, and overall performance—a clear upgrade from its predecessor.

*(Photos by Henry A. De Leon and Zalda R. Gayahan, S&T Media Service, STII/MIRDC)*