

Prevent Rivers from Becoming Shallow

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Submitted: 2025, Jul 02; **Accepted:** 2025, Aug 04; **Published:** 2025, Aug 12

Citation: Khalidullin, O. (2025). Prevent Rivers from Becoming Shallow. *J Agri Horti Res*, 8(2), 01-02.

The ever-increasing destructive floods in quantity and volume from rivers overflowing their banks in all countries of all continents require a revision of humanity's attitude toward rivers. In addition to destroying roads and buildings, flood waters flood vast territories and create artificial evaporation that changes sedimentation, which in turn affects the planet's climate.

A method and device for deepening river bottoms have been developed to prevent floods.

The technical solution relates to the means of deepening the bottom of rivers and other bodies of water.

These attitudes are known for their absolute indifference, except for extracting electricity from the waters of blocked channels to rotate the turbines of electric generators. Many companies buy or rent dredging equipment and deepen the bottom by several meters. This allows for a slight reduction in the destructiveness of floods. But not for long. The depth of rivers decreases. But not for long. In order to prevent floods, it is necessary to maintain the profile, or more specifically, the depth of the river along its entire length, so that all the waters in the spring and after heavy rains could not overflow the banks. To do this, it is necessary to regularly clean or prevent sediments. Modern serial dredgers can deepen the river bottom, but they require significant efforts. To do this, they deepen the bottom several meters deep and pollute the coastal areas.

At the same time, considerable volumes of fuel are consumed, continuous monitoring and management of all processes are necessary. And the dug ditches and pits very quickly silt up and the rise in the river bottom continues along the entire length of the river. Floods continue during subsequent high waters. Such technology requires a floating craft, considerable displacement, capable of carrying such actuators as propellers, anchor devices, bottom sediment activators, pumps, pipelines. And all these units and mechanisms must be provided with electric and hydraulic

drives with powerful energy. This requires a corresponding powerful power plant and continuous control. The power plants of serial dredgers, now in the range from 100 to 1000 kW, require a lot of fuel, lubricants, time, and continuous control and maintenance. The cost of such equipment is hundreds and thousands of dollars.

It is necessary to simply prevent the shallowing of rivers. Or remove what has settled recently along the entire length of the river.

A technical solution has been developed - a new method of preventing floods, which can remove a small layer of the bottom along the entire length of the river at a cost that is orders of magnitude lower than serial machines. In essence, deepening should not become an immediate need, but a constant and regular maintenance of the river.

It is offered to the enterprise that can go for implementation and become a co-author and leader of the new technology of dredging and anchoring of floating craft. The new device also includes a new method of anchoring or holding a vessel in place with a gradual movement of this place. Suitable for any floating craft. This will be especially effective for vessels of significant displacement, tankers and cruise yachts, which, when anchoring, catch underwater pipes and cables, tear them or drop their anchors.

Implementation of innovations is such a complex process that the author alone is not able to manufacture a prototype, conduct a full range of tests and create production of new products. Here, a team of authors interested in the final result is needed. I propose to create such a team that will be able to master and launch a line of new dredging equipment for flood prevention. It is more rational if an established shipbuilding or ship repair company takes on this. The formula and description of the invention are ready. If such a company is found, then we will decide together how to formalize the invention: in the form of a patent or Know-How.

The device operates using the river current. Its standard sizes can be located in a fairly wide range, depending on the need and the size of the rivers. Preferably, the size of such devices is several centimeters. It can be equipped with a small power plant with blades and a software device that can, upon reaching a given

location, raise the dredger to the surface and return it to the beginning of the river. In essence, it is an unmanned underwater device with autonomous and programmable control, a drone that works independently and continuously.

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