

Green Water Credits

A mechanism for direct payment to people in rural areas in return for water management activities that are presently un-recognized and unrewarded. Benefits to poor people drive this initiative which, at the same time, safeguards water resources and food security for everyone.

Green water is water held in the soil and accessible to plants. Two thirds of the world's fresh water is *green* water but it is ignored by engineers because they can't pipe or pump it, by economists because they can't price it, and by governments because they can't tax it. Soils also deliver groundwater and stream flow that can be tapped for use elsewhere; this is dubbed **blue water**.

Rural people manage all fresh water at source – by looking after the land. *Green* water is harvested as crops and livestock but most of the benefits of *blue* water are reaped downstream. Depending on management, the resource may be increased 3-fold, or destroyed. The costs of management failure are rural poverty that drives people to cities and across borders, floods, drought, loss of food and water security, and loss of environmental services provided by the soil and fresh water flows.

This management failure stems from a failure of the present market economy. Where there is a market in water, it is confined to delivery to the consumer; at source, water is treated as a free common resource – it is taken for granted! Green Water Credits rectify the market failure by fair payment for management services.

For green water credits to happen requires three things:

1. Quantification of the resource and how it can be optimized by land use and management;
2. Valuation of its various uses within the basin and the costs of floods, sedimentation, and the diseases caused by a lack of clean water – enabling benefit cost analysis;
3. An agreed mechanism for:
 - a. Specifying optimum management;
 - b. Establishing that the work is done;
 - c. Negotiating a fair price;
 - d. Collection and payment of credits.

The big issue is: *How will they work in the community?* We have seen, time and time again, that small cash injections can have a significant multiplier in poor communities; we know that if we pay people enough to do a job, it is done and done well; and water supply from good soil and water management cannot be achieved at a comparable cost by engineering and water treatment. The issue is resolved into: agreeing on the best management practice, and negotiating the rate for the job.

The nub of the matter is to persuade the people downstream to pay for what they now receive free! Payments may be financed by a mix of water users and public utilities to secure water supplies and quality, by insurers seeking to reduce their exposure to environmental risks and through general taxation. International mechanisms, such as debt swaps, will be necessary to kick-start the virtuous cycle.

Best practice also brings direct benefits to farmers – better and more reliable crop yields, better prices for better-quality products. Investment in the catchment and in skilled managers of the land may encourage institutional arrangements that will be needed to protect that investment: secure land tenure, water rights and other legal safeguards.

Operational steps in-basin

1. Participatory, strategic assessment:
 - a. Is water an issue?
 - b. What are the competing claims?
 - c. What are the existing land and water rights, whom have the right to modify them, whom has to compensate whom?
 - d. What has been tried already?
 - e. What institutions are in place that can handle the initiative?
2. Establish agreed ways to assess the water resources, the demands upon them and the value of these resources and costs of mismanagement – then do it.
3. Assess the extent to which land use and management can optimize the resource and its distribution, spatial and temporal.
4. Establish a platform for negotiation between interested parties, ensure that each party has a voice and that each is well informed.
5. Seek optimum allocation: between parties, upstream-downstream, environmental flows – economic demand. Arrive at a fair price for specified management activities to achieve optimum allocation.
6. Establish a mechanism for collection and payment of credits.
7. Establish arrangements for claims, verification, and settlement of disputes.

Operational steps nationally

1. Establish appropriate legal framework.
2. Decide appropriate national format and incorporate into national sustainable development plan.

Operational steps internationally

Establish a global financial facility to underpin local efforts with start-up finance, for example through debt swaps and trading in green water credits over a minimum of 25 years.

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