

“New Water”

A win-win positive sum solution for sharing of transboundary water resources in semi-arid and arid areas

Using Water as a vehicle of Peace

- THIS PRESENTATION HAS BEEN SHARED UPON THE REQUEST OF THE COMMITTEE ON MIDDLE EAST ISSUES/IPU
- THE CONTENT CAN ONLY BE USED WITH PROPER REFERENCE TO THE AUTHORS- Dr. David Phillips for the Palestinian Negotiations Support Project
- PALESTINIAN DELEGATION HAS AGREED TO PROVIDE THOSE SLIDES AS A PROPOSED MODEL FOR USING SCIENCE AND TECHNOLOGY IN WATER AS A VEHICLE OF PEACE, IN LINE WITH THE PALESTINIAN FORMAL POSITION ON WATER.

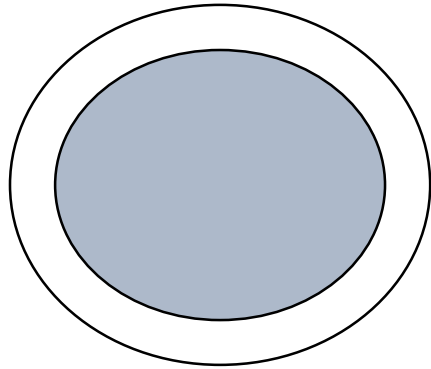
What is “New Water”

- “New Water”= alternative non-traditional sources of water
- The provision of ‘new water’ refers to the development of water supplies over and above those provided by existing water resources, such as through desalination, water re-use, or possible importation from other basins
- The provision of ‘new water’ is a totally separate issue from specific allocation of the existing shared water resources of the parties
- Investing in “ New Water” does not negate, detract, or prejudice Water Rights of a State
- Different forms of “new water” can be used to augment supply of each party
- The continued growth in population – if this persists – will eventually require the production of very significant amounts of “new water”

Recognition of added value of “New Water”

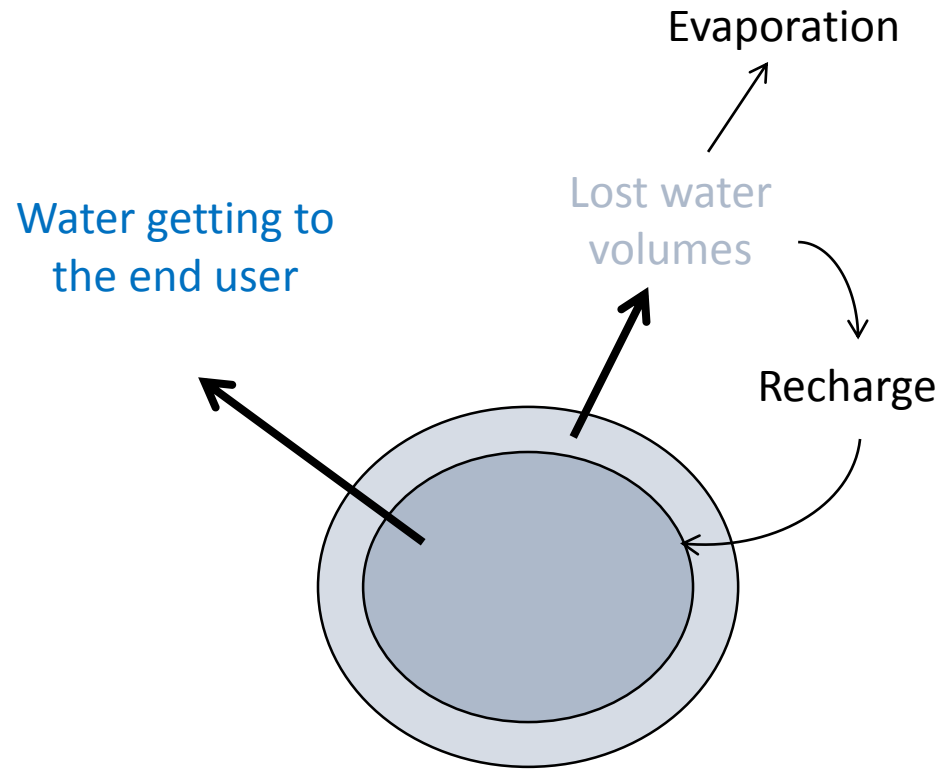
- Under international law, ‘new water’ which is developed unilaterally by one Party could be employed by the other Party to trigger a reallocation of the total combined water resource, after the original “equitable and reasonable” allocation.
- All responsible and committed parties agree that there is a need to develop new water resources, through a number of activities. It is notable that such “new water” will alter the magnitude of the total water resource in the region

Making 'New Water'



The Status Quo

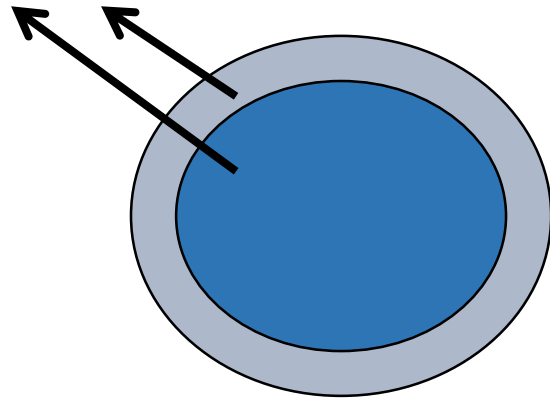
“The engineers’ focus” is on available water, or water that has been mobilised from the natural resource. However, this actually has two components.....



**Step 1: Recognise reality,
and reduce losses**

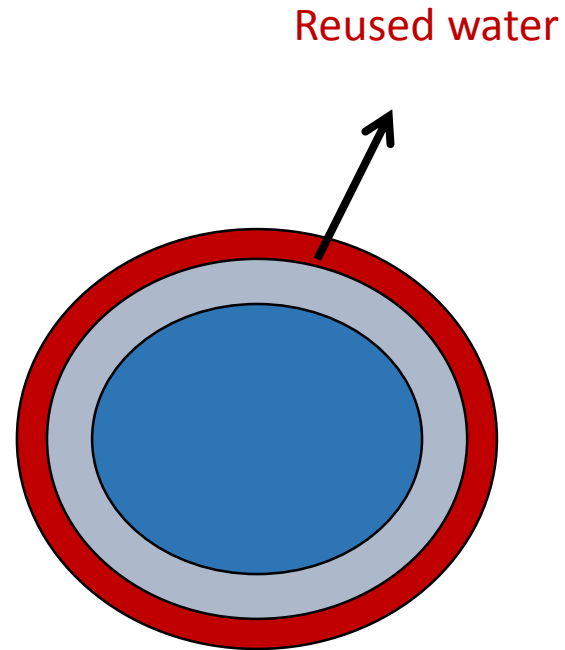
“The engineers’ focus” is on available water as noted, but losses from the system are often ignored. Reducing losses (UfW, leakage, etc.) enhances the water volumes getting to the end user.

Higher
efficiencies



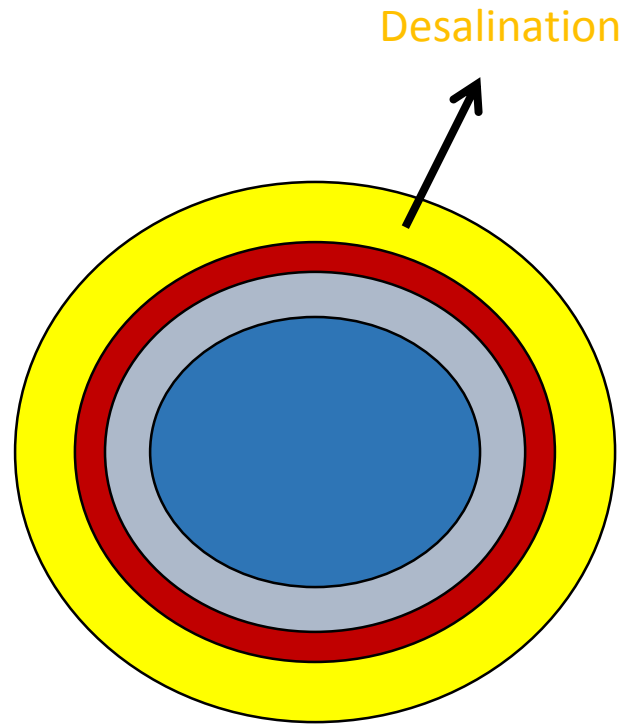
Step 2: Water Demand Management

WDM is another focus of recent efforts, especially where water is scarce. This essentially addresses the efficiency of water use, seeking to improve efficiencies.



Step 3: Introduce reuse of the available supplies

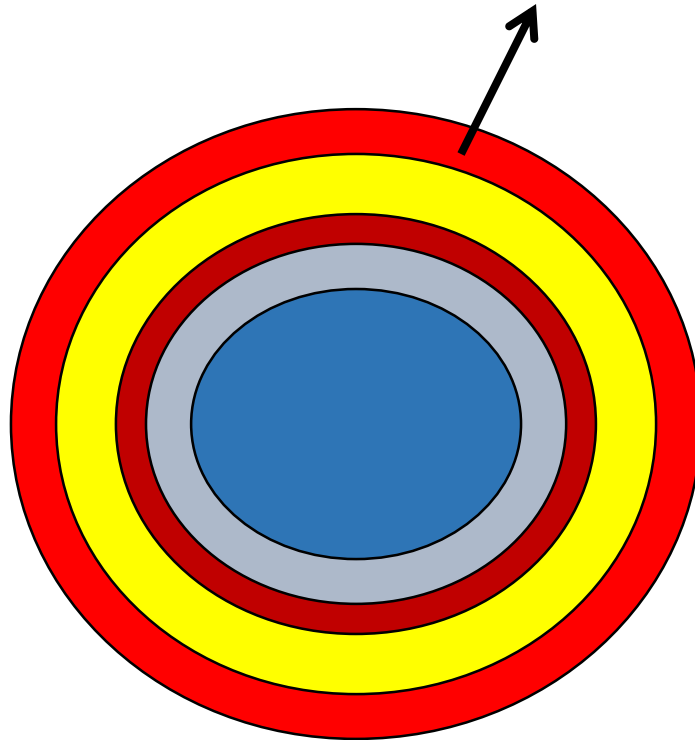
The reuse of water is possible in many fashions, only some of these involving treatment between the different forms of use. Reuse effectively expands the water volume that is available to end users.



Step 4: Introduce desalination

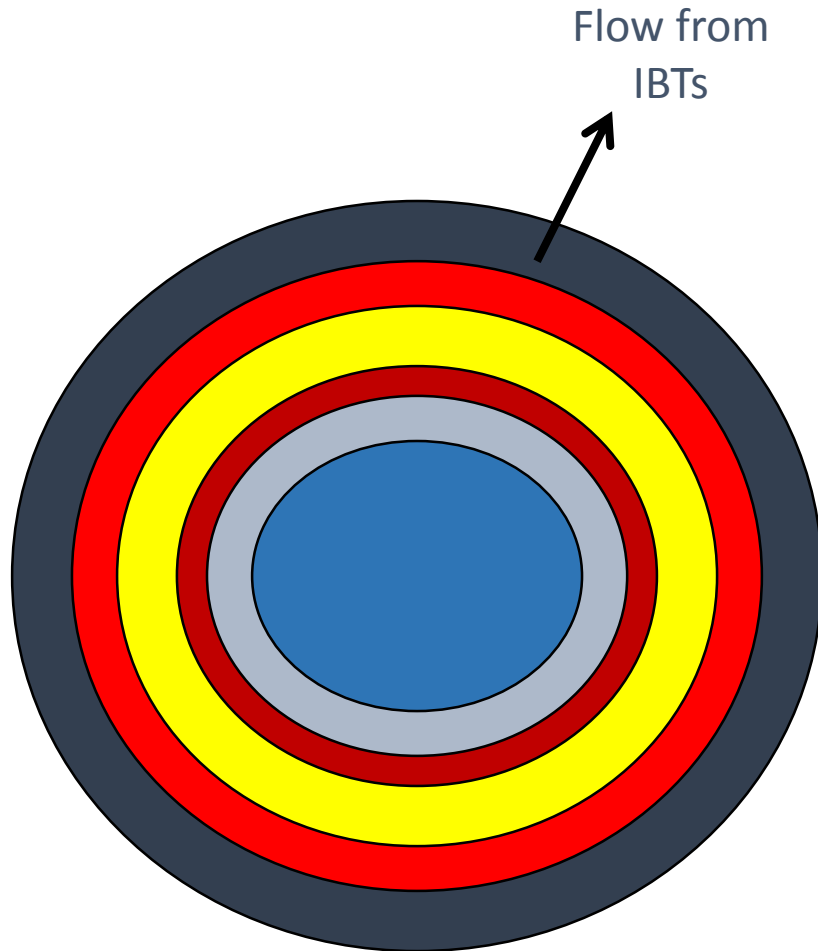
The costs of desalination have reduced significantly in the last two decades, implying that this is now affordable in many circumstances. This changes the preferred strategies for water supply in many scenarios.

Reuse of desalinated
flows after treatment



**Step 5: Reuse the
desalinated supply**

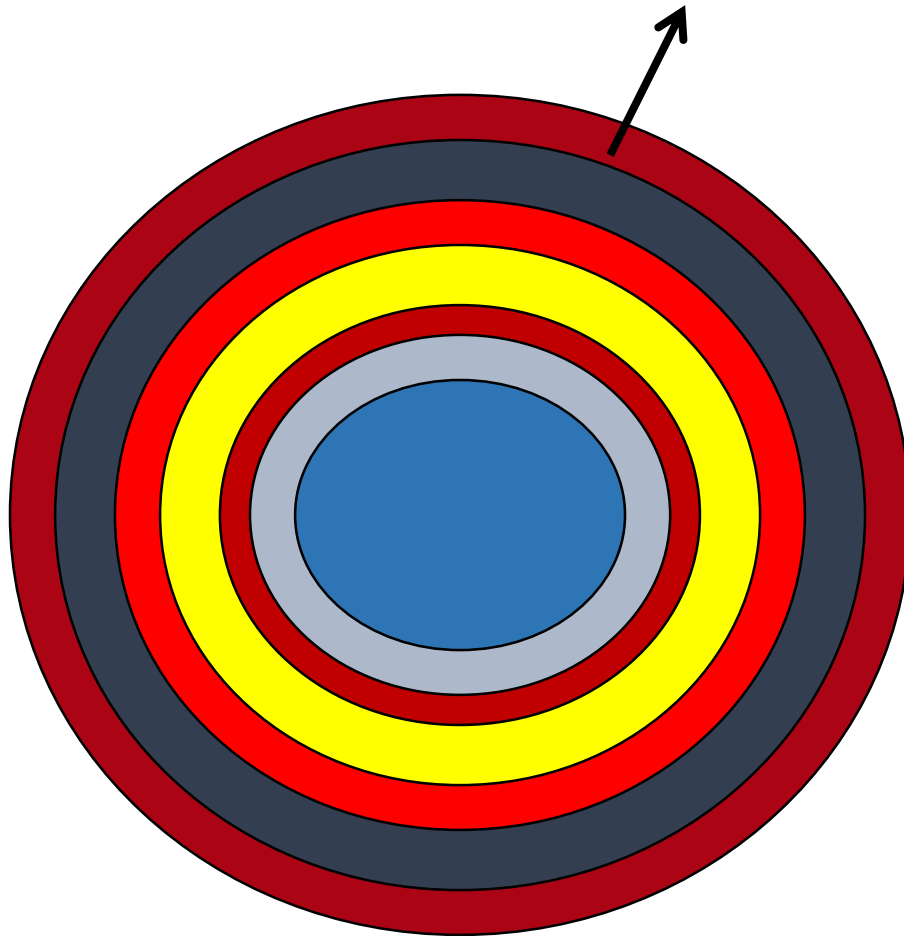
*Desalinated flows are
generally used as
domestic supply. Up to
70% of domestic
wastewater flows can be
reused after treatment, as
little contamination by
metals/trace organics
eventuates.*



Step 6: Introduce inter-basin transfers

In basins where particular water scarcity exists, IBTs may be used to bring water from elsewhere. This is especially common in some regions, and has great potential in the Middle East.

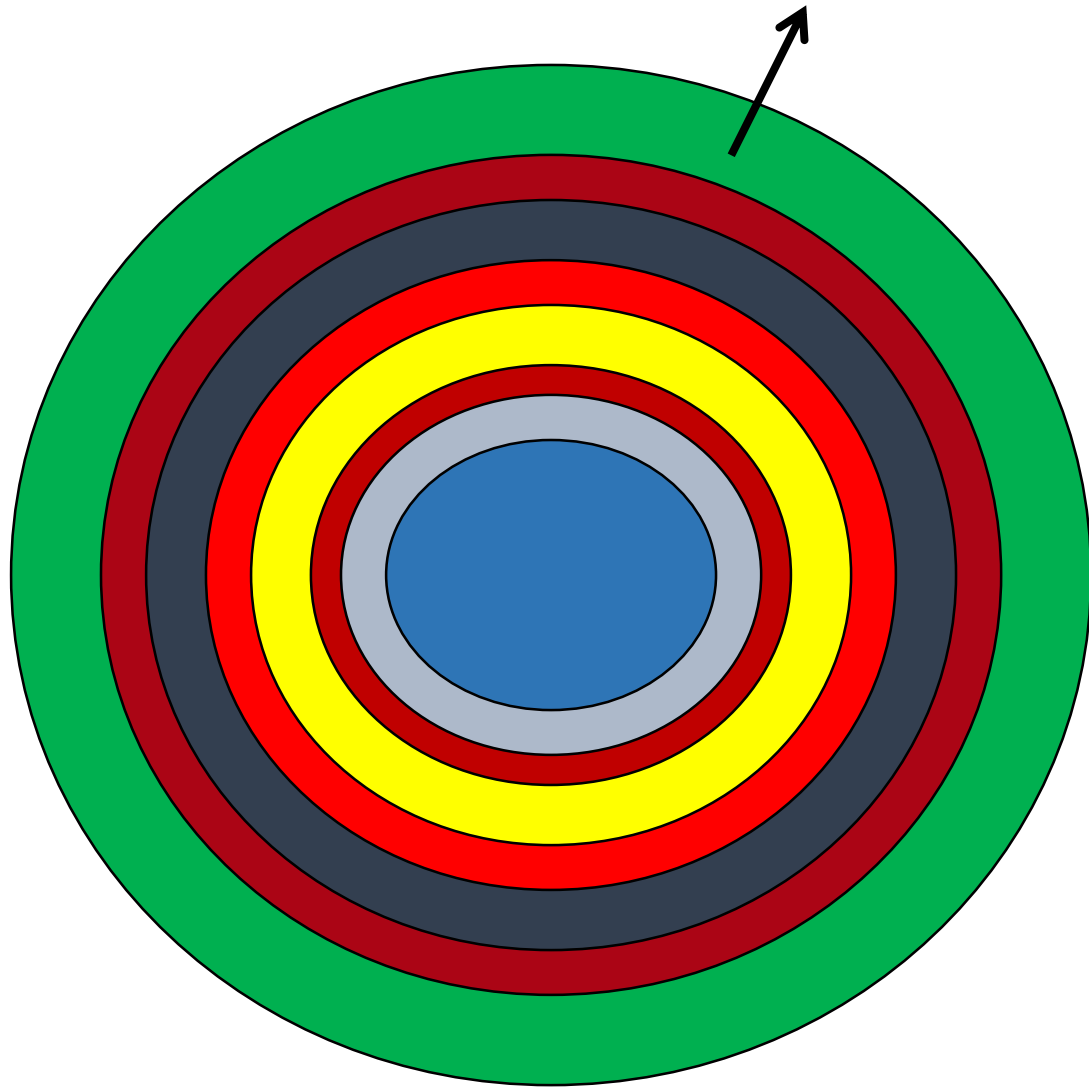
Reuse of the IBT flows



Step 7: Reuse the IBT flows

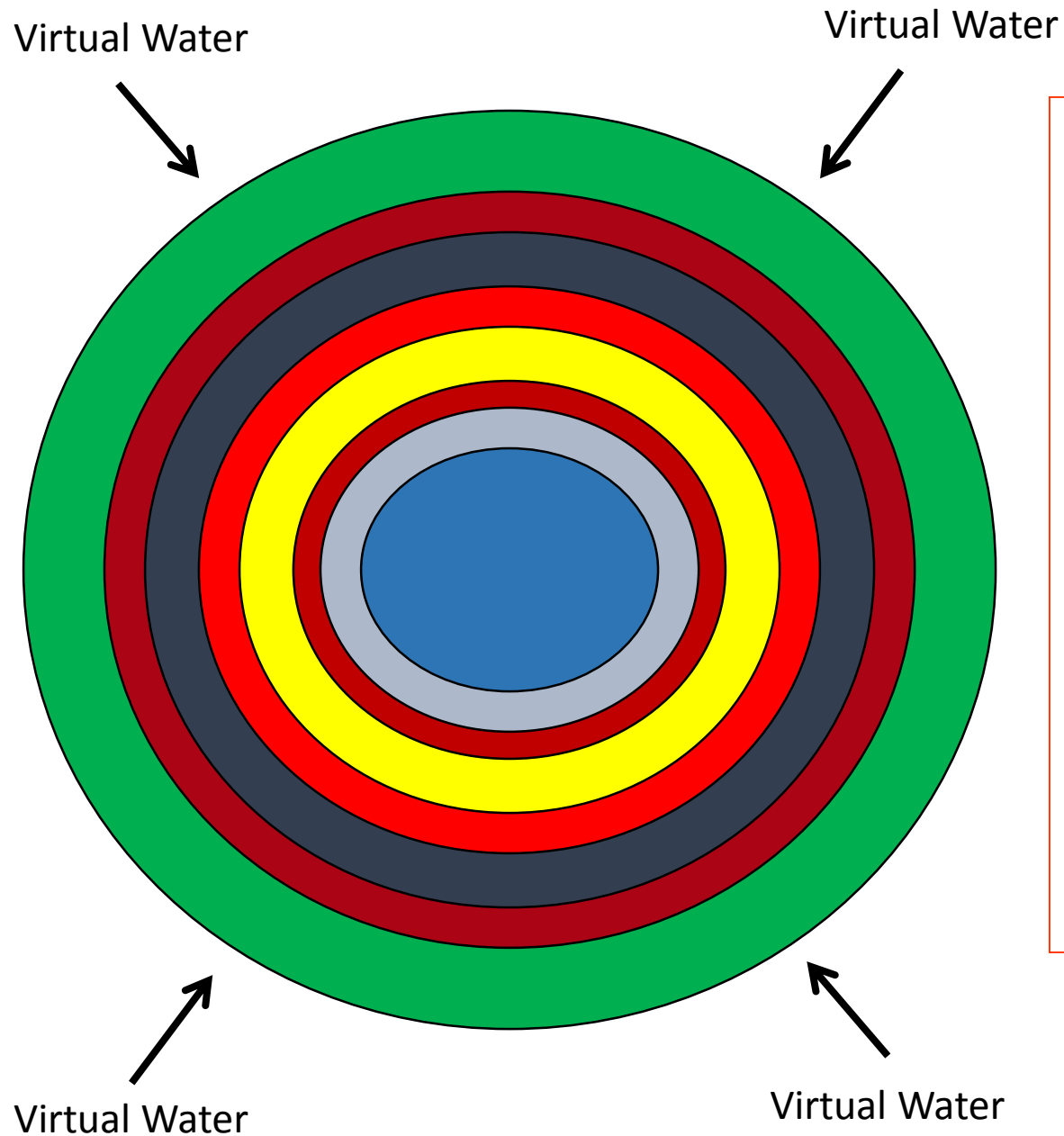
Flows that are transferred into water-scarce basins through IBTs can also be reused, enhancing the overall efficiency of water use.

Green Water



Step 8: Use Green Water better

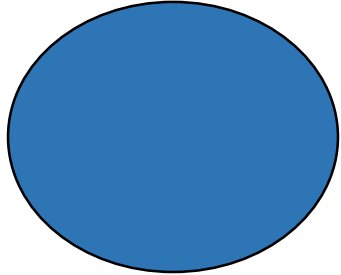
Green Water (soil water) volumes can be considerably greater than those of Blue Water. Greater attention to the Green Water/Blue Water interface can enhance agricultural outputs very considerably.



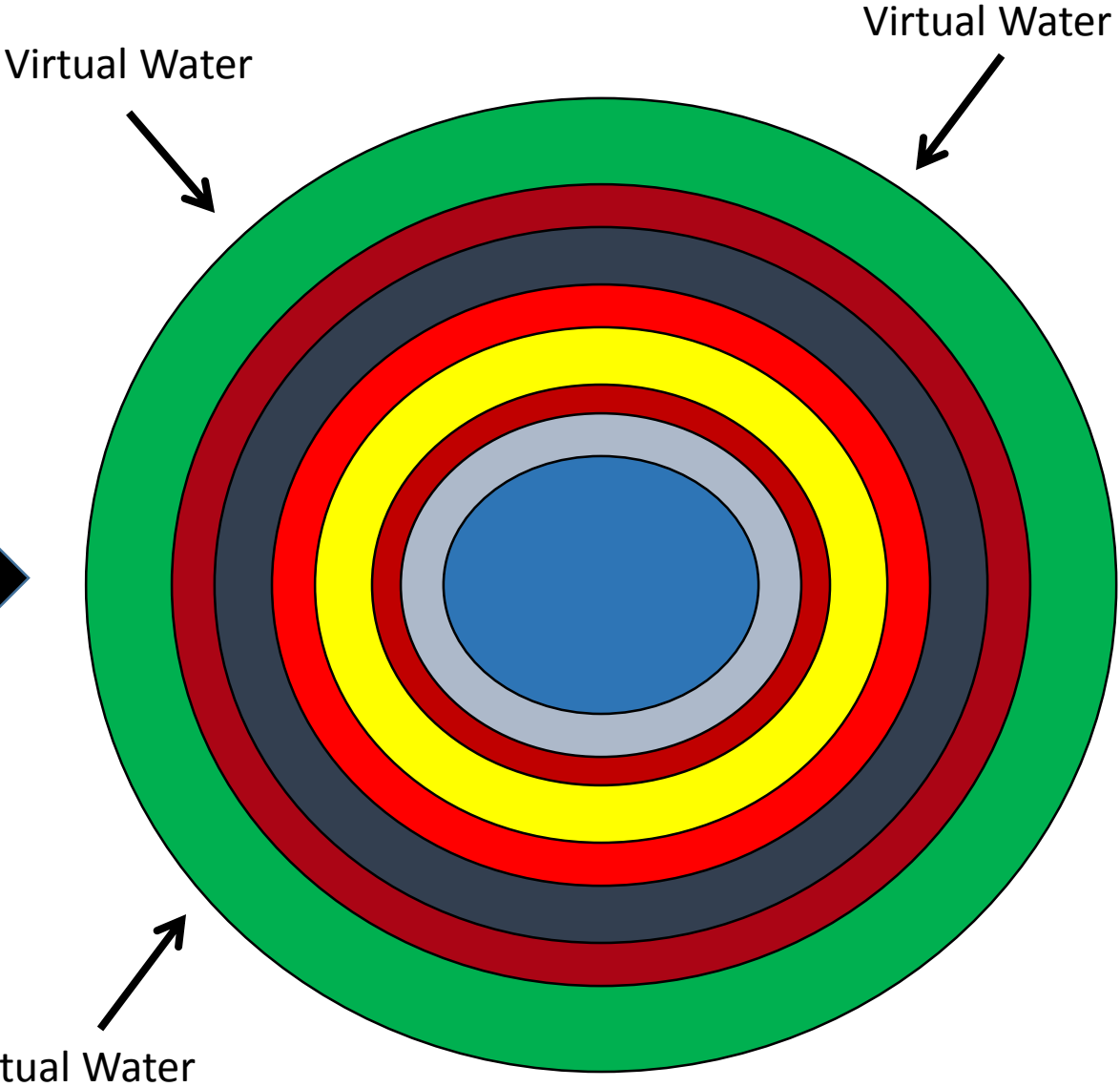
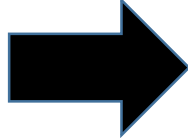
Step 9: Consider Virtual Water

Trade in agricultural and industrial products determines Virtual Water flows. Water-scarce countries can address their problems through this (e.g. Israel; Egypt). Many countries are ignorant of this possibility, however.

Making the pie bigger...



The status quo



Virtual Water

The potential end point