



TAM Ceramics Newsletter

Granulated Ceramic Water Filter Media

November/December 2019

Ceramics and *No Poverty*: a durable integrated approach to the 2030 goals

A PowerPoint presentation entitled, *Ceramics in Environmental Health* was recently presented at the University of Michigan Conference on Sustainability in Development. A premise is that given commonplace resources and capacity in ceramics, beginning industrial development is possible nearly anywhere:

https://drive.google.com/file/d/14wd8_9CoVRBRaV7V0ktUQf-BAjqPQasK1/view?usp=sharing

Ceramic science is the study of inorganic, non-metallic substances at high temperature and is at the origin of industrial development. Once simple work with metals is included all that is otherwise necessary for this is the local ceramists. Local clays will be for stove production and for simple kilns.

Shown is the Nepali candle filter in 2003, from which the first filter media of granulated ceramics was made, crushed, granulated and sized to a proper rate of flow.

The presentation of the link describes insulating ceramic rocket stoves which can be fired at low temperatures by comparison to other ceramics, at around 700C (~1,300F). These low temperatures are easily accessible in kilns built of common clays or by traditional firing. The insulating rocket stove of this kiln is best practice for sustainability.

Produced almost anywhere by local ceramists the stoves are low cost and prevent respiratory illnesses. The pot fits down inside, so biomass fuel burns hot and there is no smoke. The use of carbonized fuel will be seen for what it is: destructive of the environment. There will be no need to cut down trees for the production of charcoal fuel; no need for carbonized biomass. Briquettes of agricultural waste will prevent de-forestation.

The local ceramists of these projects will need to locate the higher fire clays that will make possible such ceramic products as the candle filters of the Nepali system example as well as roof tiles, dinnerware and squat toilets, all made possible by such clays and kilns.

The higher temperatures of these products will give the greater strength necessary by comparison to the bricks of the insulating rocket stoves. Ceramic processes are at the start of industrial development along with simple work with metals.

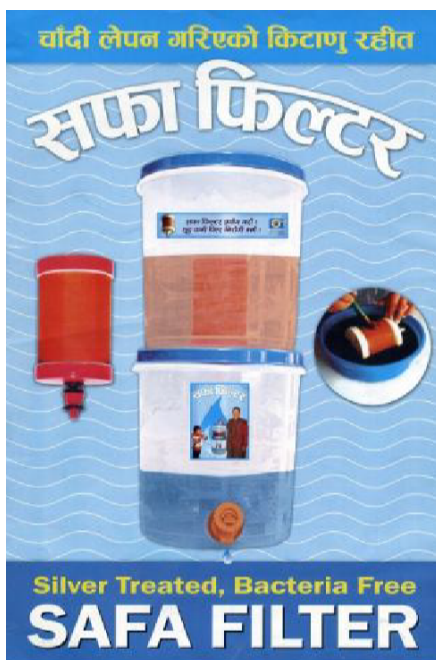
The religious view: the princes of the Church side with the poor

In the October 29, 2019 issue of the *Nairobi Daily Nation* is the article, *Pope Demands 'Predators' Stop Plundering The Earth*. <https://www.nation.co.ke/lifestyle/Pope-demands-predators-stop-plundering-the-Earth/1190-5327492-t9d6nlz/index.html>

In the article the Pope states during a synod of Bishops, that the poor are "threatened by predatory models of development". As the article also states, "Francis denounced those wielding power who look down on others: "considering them backward and of little worth, they despise their traditions, erase their history, occupy their lands, and usurp their goods".

All over the developing world the rural and peri-urban poor are literally walking on top of wonderful natural resources, yet there has been practically no one to show them how to make use of these. All over the world getting opportunity to the poor will only uplift society. How else will we achieve 2030 goal no. 1, No Poverty?

Reference: 'Clay Pot Effective in Filtering Dirty Water.' *Nairobi Daily Nation*, October 10, 1996.



Partner with TAM Ceramics in totally sustainable water treatment!

TAM's water filter media and systems of granulated ceramics will for the first time make possible large-scale, point-of-use water treatment. Waterborne pathogens will be reduced to the highest standard using gravity only, i.e., with no chemicals, electricity or gadgetry of any kind.

A human centered approach to water treatment will in general start with sedimentation of the particles of turbidity. As mentioned, first work with localized optimization and development of natural flocculants could start with the use of such cellulose based materials as wood chips and agricultural waste.

The success of the human centered approach to the water treatment will depend largely on community engagement, an approach that is increasingly promoted by sustainable development organizers. Community committees will designate management of the water treatment for such tasks as sedimentation of particles prior to input of water into the filter systems. The filter systems will be topped off with water to be treated on an as-needed basis.

Regardless of what type of water treatment a community uses there is still a need to familiarize system users with water-related hygiene. In this case familiarization of the need for cleaning of containers and hand washing will be at the filter systems, not in the household. The more public setting suggests a more viable approach to building awareness.



WATER FILTER MEDIA OF GRANULATED CERAMICS
4511 Hyde Park Blvd., Niagara Falls, NY 14305 USA
Email: RHarvey@TAMCeramics
Telephone: 1-716-278-9550