Global Relevance: NRRI develops biofuels for Senegal

Sure, Minnesota has an invasive cattail that is impacting native vegetation. But our problem is nothing compared to the urgent cattail invasion problems along the Senegal River in Africa. NRRI is working to develop a holistic solution to the Typha australis problem in the countries of Mauritania and Senegal. And if the solutions work there, they will certainly benefit Minnesota.

First steps toward that goal were made in November as NRRI Associate Director Don Fosnacht went to Senegal with Peter Strzok, a retired U.S. Army Lt. Colonel who has travelled extensively throughout Africa. The solution they’re developing will remove the cattail, provide a low-pollutant cooking fuel and create much needed jobs. This is a key principle which the domino effect will stabilize the vulnerable communities along the river and discourage tree harvesting for fuel due to already barren landscape.

“Invasive Typha is a nasty plant that is causing pervasive problems,” said Fosnacht. “We saw where a whole village had to move because they lost access to the river, they couldn’t fish and the mosquitoes got even worse. They had to get away.”

Harvesting this plant isn’t easy. It grows densely, almost like a wall of tightly woven mass. And the mosquito thrive in the stagnant habitats. With the threat of malaria, that’s a real problem.

NRRI is currently scaling up a hydrothermal carbonization process that will convert moisture-filled biomass, such as the Typha, into something like mud. Once dried and formed into briquettes, the fuel burns very efficiently with low environmental impact. NRRI will receive a delivery of Typha from Senegal to test the process with this plant. Meanwhile, funds are sought to purchase an efficient process will help The Superior harbor where the terns fights for space overrun with gulls.

Niemi receives award for bird research career

Because his current book project dovetails an earlier two volume tome written by Thomas S. Roberts, NRRI Scientist Jerry Niemi was especially honored to receive a memorial award in Roberts’ name from the Minnesota Ornithologists Union.

Niemi’s project, the “Minnesota Breeding Bird Atlas” established the status of Minnesota’s breeding bird population from 2009 to 2013. It will be published by the University of Minnesota Press in 2018. Roberts’ work in the late 1800s and early 1900s provides the only basis for a historical comparison of changes on Minnesota’s birds over the past 100 - 150 years.

The Thomas S. Roberts Memorial Award was presented at the Minnesota Ornithologists Union annual paper session at the University of Minnesota’s Bell Museum. Niemi was nominated for the award by MOU members Janet Green and Lee Plannmuller.

“Jerry’s intimate engagement with all aspects of forest management, he is widely recognized as a calm, non-biased voice that all hold in high respect.”