Partnership between India, one of the world’s rapidly growing countries; the International Rice Research Institute, a leading agricultural research organization; and crop researchers in poor countries produces innovative submergence-tolerant rice, and helps some of the world’s poorest farmers grow more food.

**Problem:** In areas of Asia and Africa where rice-growing farmers depend on rain fed agriculture, rice productivity is low and unstable due to stresses such as flooding, drought and poor soils.

- Flooding regularly afflicts over 6 million hectares in South Asia and as much as one-third of the rain-fed lowland rice-growing areas in sub-Saharan Africa.
- Neither newer rice varieties nor farmers’ traditional varieties are able to survive prolonged submergence under water.
- There’s a need for new rice varieties that can withstand a range of environmental stresses.

**Innovation:** Harness the knowledge of leading global, regional and national agricultural researchers and combine it with local know-how to develop and distribute submergence-tolerant rice to small farmers.

- Through Stress Tolerant Rice for Africa and Asia (STRASA), the International Rice Research Institute (IRRI) partners with researchers at the Africa Rice Center, an African research organization, and national scientists in poor countries, creating submergence-tolerant rice varieties that can “hold its breath” underwater.
- STRASA developed improved varieties through identifying and using traits that allow rice to make better use of oxygen even while submerged—coping with this stress that can devastate crops.
**Impact:** STRASA’s innovative partnerships are developing new varieties for rice farmers in two continents with very different conditions.

- More than 1.1 million farmers in India are using STRASA’s “scuba rice,” which can survive 20 days of submergence. This new variety has saved entire crops from being wiped out.
- The government of India has been instrumental in getting new varieties to poor farmers, and African governments are being increasingly proactive.
- In the next six years, STRASA predicts that over 20 million farmers will be planting scuba rice and other stress-resistant varieties in South Asia and Africa.

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**Video:** Time-lapse video shows flood tolerance in rice [http://www.youtube.com/watch?v=DJsNwYX1Nc0&feature=player_embedded](http://www.youtube.com/watch?v=DJsNwYX1Nc0&feature=player_embedded)

**More Information:** [www.irri.org](http://www.irri.org)