Improving nitrogen-use efficiency in irrigated rice (*Oryza sativa* L.); use of stabilized urea

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- Net extent harvested in 2013 was 1.07 million ha and production 4.62 million mt (Central Bank, 2014)
- Rice accounts for more than 40% calorie intake (Vlec et al., 1986)
- Sri Lanka has imported 0.6 mn Mt of solid fertilizer in 2012, urea ~50% (National Fertilizer Secretariat, 2013)
- Around 64% of the imported urea used in paddy cultivation (Sirisena et al., 2001)
- Recovery of applied N 15-30% (Sirisena et al., 2001)
Increasing N-use efficiency through minimizing losses is critical in enhancing yields.

Nitrification Inhibitors (NI) delay the bacterial oxidation of the NH$_4^+$ (Linquist et al. 2013)

Urease inhibitors (UI) delay the transformation of urea to NH$_4^+$ (Dawar et al. 2011)

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AE\textsubscript{N} and yield in rice could be significantly increased by reducing N losses through treating urea with inhibitor/s (DCD and/or NBPT) when 50% of the recommended urea rate is applied.