

## Hatching and head-starting in India

### Programme for Endangered Chelonians in the National Chambal River Sanctuary

Chelonians are by far the most ancient quadruped vertebrates on earth and India is the home to very large and diverse members of this order. 28 species of tortoises and freshwater turtles occur there and at least three species are endemic, as well as a number of subspecies.

Species richness and diversity in India is not only of national significance but also globally. In Asia, India ranks among the top five most important countries for turtle conservation but human pressures on turtle habitats such as sand mining, agriculture, reclamation of wetlands, alteration of rivers for irrigation, pollution, eutrophication, and intensive fishing have not only taken a heavy toll of turtle biomass but also has disrupted nesting and reproduction.

Due to indirect pressures several freshwater turtles, in spite of legal protection, are still directly exploited for both local consumption and export. This has not only decimated turtle populations and has caused a loss of species diversity, but certain species have become severely threatened or seriously endangered. Although some species receive protection in protected areas, there have been few concerted and sustained efforts to conserve Indian chelonians. There have been sporadic attempts to breed species in captivity at the Madras Crocodile Bank Trust (MCBT), and at the Kukrail Gharial Centre in Uttar Pradesh. These efforts have not yet consolidated the conservation requirements or ensured the continued survival of north India's diverse turtle assemblage.

There is an urgent need for assessment of remaining wild populations and especially for proactive in-situ and ex-situ efforts for conservation. Some species may become extinct in the near future, while several other data deficient species may reach critical endangerment or be extirpated. Recently, ten species were prioritized, endangered or critically endangered, for immediate conservation.

The Hatching and Head starting project have set up an in-situ subsidiary centre at Etawah in the state of Uttar Pradesh with the selection of the centre's location based on keeping transportation to a minimum to ensure egg survival and higher hatching success. A second in situ hatchery was started in Pilua Ka Nagra, 34 km from Etawah.

Nest predation by jackals has been identified as one of the leading causes responsible for the declines of large riverine species in the National Chambal River Sanctuary. To overcome this negative factor, egg collection, hatching and head starting have been recommended to help improve juvenile survival and boost population numbers annually. Basic infrastructure have been erected for egg incubation and large plastic tubs or Fiberglas containers were set up to hold hatchlings for two months before release into the river systems. Work on all of these centres began in January 2006 and was completed in February 2006. The eggs were collected during March 2006 and in subsequent months. The facilities will provide for egg incubation and the rearing of young turtles for eventual release into protected areas in National Chambal Sanctuary. Currently the hatchery in Etawah holds 256 *K. dhongoka* clutches and 38 *K. katchuga* clutches. The Pilua Ka Nagra hatchery has collected 90 *K. dhongoka* nests that are under incubation at the hatchery.