

GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING AND FISHERIES  
LOK SABHA  
UNSTARRED QUESTION NO.2004  
TO BE ANSWERED ON 14<sup>th</sup> MARCH, 2017.  
SPREAD OF HARMFUL ALGAL BLOOMS

2004: DR. GOKARAJU GANGA RAJU:

Will the Minister of AGRICULTURE AND FARMERS WELFARE कृषि और किसान कल्याण मंत्री be pleased to state:

- (a) whether it is a fact that the small pelagic, Indian oil sardine, mackerel and anchovies, contribute almost 55 per cent of the marine fish catch and almost 90 per cent of the artisan fishermen directly or indirectly rely on these fishes for their livelihood and therefore the inter-annual variations in the availability of these fishes have a considerable impact on the economy of the common men;
- (b) if so, whether it is true that increasing frequency and extent of harmful algal blooms in the coastal and oceanic area of the Indian Exclusive Economic zone is a cause for concern, as it disrupts bio-geochemical cycles and possibly enhances the oxygen minimum zones, which in turn affects marine ecosystem processes such as energy flow and prey availability for mid- and upper-trophic predators;
- (c) whether it is also true that the harmful algal blooms are spreading rapidly; and
- (d) if so, the corrective steps taken by the Government thereon?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE  
(SHRI SUDARSHAN BHAGAT)

- (a) The small pelagic species, Indian Oil sardines, mackerels & anchovies contribute substantially, that is more than 50% of the marine fish catch in the country, and therefore, inter-annual variation in their catches has considerable impact on the economy of the coastal community.
- (b) to (d) It has been reported by some of the scientific organizations that harmful algal blooms (HAB's) have increased in recent years. However, oxygen deficient conditions occur naturally along the west coast of India in connection with the upwelling during southwest monsoon. Observations over the western Indian shelf and sustained measurements over the last two decades do not show any record of harmful algal blooms during the oxygen deficient period. Rapid increase in harmful algal blooms in the coastal and oceanic area of the Indian Exclusive Economic Zone has not been scientifically established.

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