(a) the defence projects which are awaiting environment clearances and how many of them are of strategic importance;

(b) what steps have been taken to meet the requirement of Ministry of Environment & Forest for expeditious clearances;

(c) where it is not possible to satisfy Ministry of Environment & Forest has the matter been placed before Cabinet for decision; and

(d) if not, the reasons therefor?

THE MINISTER OF DEFENCE (SHRI A.K. ANTONY): (a) to (d) Information is being collected and will be laid on the Table of the House.

Progress made by KEDP

189. SHRI N.K. SINGH: Will the Minister of DEFENCE be pleased to state:

(a) the progress made by Kaveri Engine Development Project (KEDP) since its inception;

(b) the cost and time overruns incurred by the project till date and the reasons therefor;

(c) whether the Ministry is considering a proposal of co-development and co-production through a joint venture with a foreign vendor; and

(d) if so, the time-line of such contract to be finalized?

THE MINISTER OF DEFENCE (SHRI A.K. ANTONY): (a) So far, nine prototypes of Kaveri engines and 4 prototypes of Kaveri Core (Kabini) engines have been developed. About 1975 hours of testing has been conducted on Kaveri and its Core engines at ground and altitude conditions.

Kaveri engine prototype (K9) has been integrated with IL-76 Aircraft at Gromov Flight Research Institute, Russia. After adequate Engine Ground Runs, taxi trials, the maiden flight test of Kaveri engine with IL-76 Aircraft for over one hour has been successfully completed on 3rd November 2010 followed by 3 more flight tests. These flight tests covered 6 Km altitude and a speed of 0.6 mach.

(b) Kaveri engine development project was sanctioned on 30th March 1989 with a Probable Date of Completion (PDC) of December 1996 and a cost of Rs.382.81 Crore. The project cost was revised to Rs.2839.00 Crore. Followings are some of the major reasons for time and cost overruns:

- Ab-initio development of engine.
- Lack of skilled manpower in engine manufacturing.
- Enhancement in the scope of project during development.
- Lack of infrastructure for engine manufacture testing and component/system level testing within the country.
- Flying Test Bed (FTB) trials was not originally included as a milestone in the project.
- Engine and component failure during testing, which is inevitable in this kind of projects resulted in changes in design and material, based on various reviews.
- Less priority from foreign manufacturing agencies in view of Minimum Order Quantity (MOQ) *vis-a-vis* the production order quantity from other engine houses.
- US sanctions imposed during 1998 affected the delivery of critical systems and components.

(c) and (d) Yes, Sir. It is proposed to develop production version Kaveri (K10) engine on co-design & co-development basis with M/s Snecma, France. The technical evaluation for this proposal has been completed. Tender Purchase Committee (TPC) with members from DRDO, Hindustan Aeronautics Limited (HAL), Indian Air Force (IAF), Indian Navy (IN) and Integrated Finance (R&D) is negotiating the commercial aspects.

Development of army communications network

190. SHRI JAI PRAKASH NARAYAN SINGH: Will the Minister of DEFENCE be pleased to state:

(a) whether Government is considering to develop Rs.10,000 cr. Army Communications Network involving private players in the high-tech systems;

(b) if so, the details in this regard; and

(c) what are the names of private Indian companies who have shown interest in the proposed communications network?

THE MINISTER OF DEFENCE (SHRI A.K. ANTONY): (a) to (c) The Government is considering a nationwide exclusive, dedicated OFC Network for Armed Forces in lieu of spectrum being released by the Defence Services.