

1. In current times communicating science and development can be underlined as root cause of any social change. Discuss various modes and means for science and development communication and how they made the social impact. Also highlight the challenges in their adoption. (12.5 Marks)

**Answer:**

**Hints:**

Science and development communication has drawn the attention of policy makers, planners, scientists, and media personnel during the past decade world over and so as in India. Various means and modes has been utilised by the science communicators to reach out to the masses. Different tool are employed for public dissemination of science and inculcation of scientific spirit.

Over the year there has been remarkable increase in developmental coverage be it science, technology, health, environment or agriculture etc. in different mass media involving print, electronic, digital, folk or interactive. Success of various initiatives like Polio eradication, enhancing coverage of institutional deliveries, MNREGA, and Sarva Shiksha Abhiyan are tremendously supported by the communication models. Some of the important modes and means employed for science and development communication are:

- Popular literature like articles/features in daily newspaper, periodical, and specialised S&T magazines etc.
- Exhibition on trains like Science Express and Environment Express.
- Science Centres and Parks.
- Contests like quizzes, essay, scientific model, toys and kits, public speaking, debate and seminars.
- Popular lectures on developmental subjects for general public, for students at schools and colleges.
- Tours to botanical, zoological gardens, museums, planetariums, bird centuries, industries and national parks.
- Digital software, Apps, CDs, social media, Blogs, Podcasts.
- Community radio, community TV, workshops, symposiums and seminars.

These participatory and interactive activities and demonstrations to learn about S&T principles applications has developed as spirit of enquiry in children and adults. Superstitions and orthodoxy is challenged by the rationality of people which is based on grounds of scientific enquiry. A programme on scientific explanation of so called miracles was carried out at national level to educate gullible people on issues of superstitions and unlawful practices. Perhaps India is the only country to have special provision "to develop scientific temper, humanism, spirit of enquiry and reform" as one of the fundamental duties in the constitution of India.

These communication means and modes of science and development has greatly impact the day to day life and make the people aware about their rights, complex issues of conflicting interests of development, environment, industry, business, politics, and public policies. However the challenges lie in to reach people and communicating the science and development in local language in a simple manner to general public. Apart from it access to scientific literature, internet and connectivity to reach out masses in rural areas is posing challenge which needs to overcome. Several initiatives has been

taken in this direction like developing Apps in regional languages, news broadcast and dubbing of important programmes in regional language which held the potential to reach masses in simpler manner.

## **PRACTICE QUESTIONS**

**Answer the following Questions**

**(12.5 Marks)**

1. There have been increasing incidences of antimicrobial resistance, which could be more disastrous than fighting a war. Discuss various reasons of antimicrobial resistance, how human activities are supporting the superbugs to thrive? What could be the way to handle this problem?
2. What do you understand by Block-Chain Technology? While describing the diverse set of applications of this technology, comment on the main advantages of this technology?

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