

# **STANDARD OPERATING PROCEDURE (SOP) FOR TRAINING ON INDIAN TRADITIONAL KNOWLEDGE SYSTEM**



## **CENTRAL ACADEMY FOR STATE FOREST SERVICE**

**Ministry of Environment, Forest & Climate Change  
Coimbatore, Tamil Nadu**

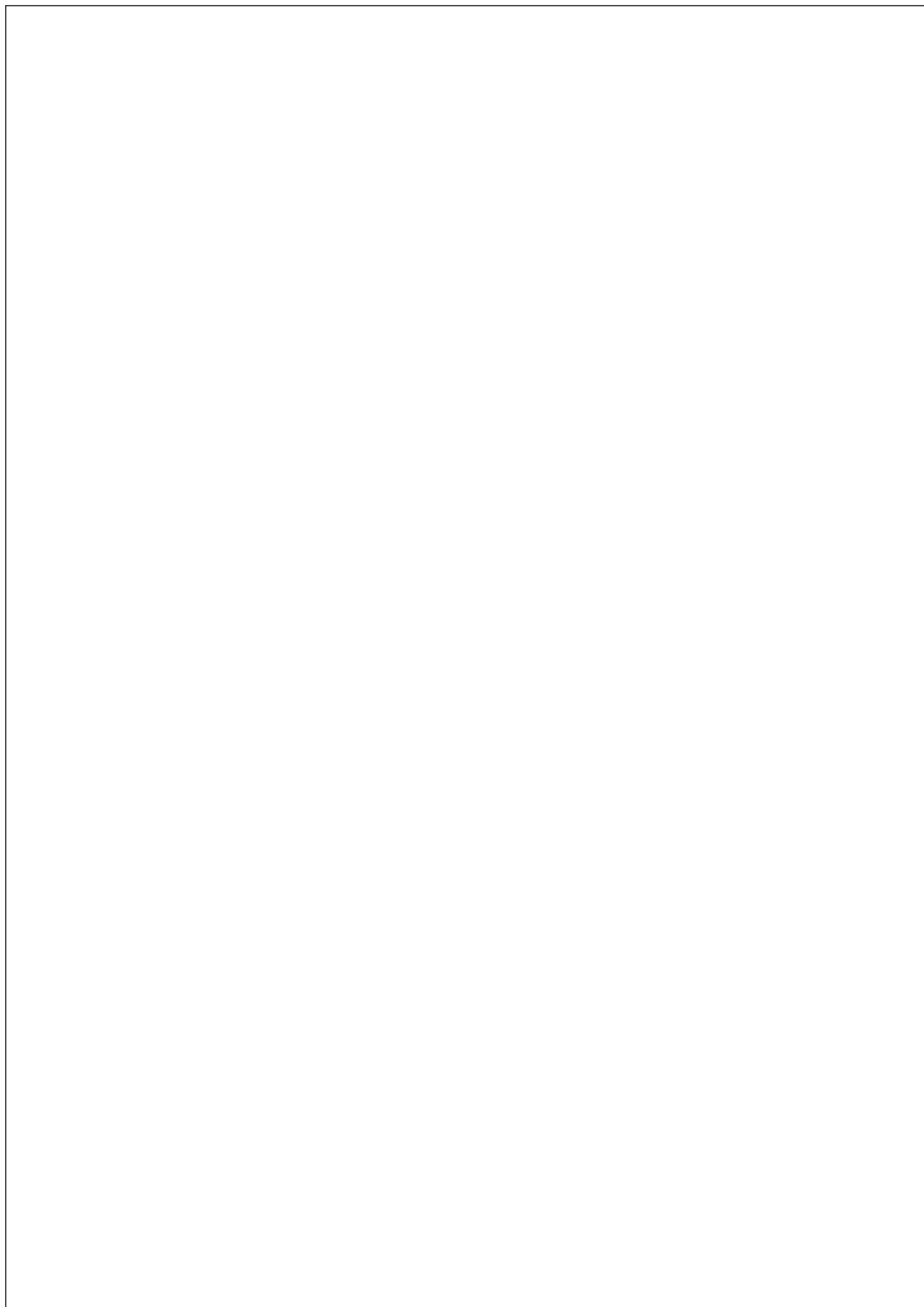


# **STANDARD OPERATING PROCEDURE (SOP) FOR TRAINING ON INDIAN TRADITIONAL KNOWLEDGE SYSTEM**



**Central Academy for State Forest Service Coimbatore**  
**Directorate of Forest Education**  
**Ministry of Environment, Forests & Climate Change**  
**Government of India**

Post Box No.: 1130, R. S. Puram Post  
Coimbatore – 641 002



# STANDARD OPERATING PROCEDURE (SOP) FOR TRAINING ON INDIAN TRADITIONAL KNOWLEDGE SYSTEM

## Introduction

The Indian Knowledge System (IKS), a comprehensive knowledge system rooted in the country's heritage. The NEP 2020 recognizes India's rich and eternal knowledge history, which includes Jnan, Vignan, and Jeevan Darshan as its guiding principles, with evolution based on experience and experiments.

## Key Components of ITKS

1. **Jnan:** Knowledge and wisdom
2. **Vignan:** Science and technology
3. **Jeevan Darshan:** Philosophy and way of life

The Indian Knowledge Systems (IKS) is recommended to be scientifically integrated, including tribal knowledge and indigenous & traditional modes of learning. It intends to encompass topics such as mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, and so on. Other key areas of focus include tribal ethno-medical practices, forest management, natural farming etc.

There is a Bhāratiya way that is both sustainable and strives for the welfare of all. If we want to become the Knowledge Leader in this century and be the 'Viśvaguru', it is imperative that we regain a comprehensive knowledge of our heritage and demonstrate the 'Indian way' of doing things to the entire world. Therefore, there is a need to rejuvenate and mainstream Indian knowledge systems for the contemporary world. The Thematic Session-15 on 'Indian Knowledge System' was one of the 16 thematic sessions, whose fundamental objective was to discuss the strategies for integrating the Indian Knowledge System into all levels of educational curriculum and to discuss ways to bring out the 'Indian way' before the world.

## The goal is to

1. Promote awareness and understanding of India's rich cultural heritage
2. Develop a unique perspective (Bhāratiya Drishti) to address current and emerging challenges
3. Incorporate traditional knowledge, including tribal and indigenous practices, into various fields like mathematics, astronomy, medicine, and agriculture
4. Encourage experiential learning through activities like touring and exploring different parts of the country

**Objective:** To provide a comprehensive understanding of the Indian traditional knowledge system (ITKS) and its significance in modern times.

**Scope:** This SOP applies to all the officer trainees attending Induction training programme, serving forest officers attending the refresher courses, participants from other services and other stakeholders attending short-term thematic training programmes.

## Target Audience

- ◆ Officer trainees attending Induction training programs
- ◆ Serving forest officers attending refresher courses
- ◆ Participants from other services and stakeholders attending thematic training programs

## Pre-Training Preparation

**Target Audience Analysis:** Identify target audience such as officer trainees attending Induction training programme, serving forest officers attending the refresher courses, participants from other services and other stake holders attending thematic training programmes, their level of prior knowledge and their expectations from the training programme

**Curriculum development:** Develop a specific curriculum that covers various aspects of ITKS for various target audience including

- **Theoretical Foundations**
  - Concept of Dharma, Moksha, and other fundamental principles of ITKS
  - History and evolution of ITKS
  - Key contributors and their contributions
- **Practical Applications**
  - Health and wellness (Ayurveda, Yoga, Naturopathy)
  - Sustainability (forest management, natural farming, water conservation)
  - Mathematics and astronomy (Vedic mathematics, Jyotish)
  - Agriculture (organic farming, crop rotation)
- **Case Studies**
  - Real-life examples of ITKS applications in modern times
  - Success stories of ITKS-based projects and initiatives

## Training Delivery

1. **Expert Faculty:** Engage experienced trainers and subject matter experts in ITKS
2. **Interactive Sessions:** Conduct engaging and interactive sessions including lectures, discussions and hands on activities
3. **Practical Applications:** provide examples of practical applications of ITKS in modern ITKS
4. **Assessment and Feedback:** conduct regular assessment and gather feedback to evaluate the effectiveness of the training

## Post Training Evaluation

1. **Knowledge assessment:** Evaluate participants understanding of ITKS concepts and principles
2. **Feedback and improvements:** Gather feedback from participants and identify areas for improvement

## Implementation and Monitoring

1. **Training Schedule:** Develop a schedule for training sessions including dates, times and venues. For officer trainees attending Induction training programme continuous programs covering in-depth knowledge and exposure may be provided. Whereas, for serving forest officers attending the refresher courses, participants from other services and other stake holders attending thematic training programmes small training capsule with one or two sessions may be organized.
2. **Resource Allocation:** Ensure availability of necessary resources, including trainers, materials and equipments
3. **Monitoring and Evaluation:** Regularly monitor the training programme and evaluate effectiveness.

## Review and Revision

1. **Periodic Review:** Periodically review the training programme for every Induction Training Course to ensure it remains relevant and effective. For others, the sessions may be selected as per the requirement on the basis of target participants.
2. **Revision and Update:** Update the curriculum and training materials as needed to reflect new developments and research in ITKS.

## Additional Components

1. **Experiential Learning**
  - Organize field visits to ancient sites, museums, and traditional knowledge centres.
  - Invite guest speakers from indigenous communities to share their experiences.
2. **Digital Platform**
  - Develop an online portal for participants to access course materials, videos, and resources.
  - Create a discussion forum for participants to share their thoughts and insights.
3. **Mentorship Program**
  - Pair participants with experienced mentors in ITKS for guidance and support.
  - Encourage participants to share their own experiences and projects.
4. **Project-Based Learning**
  - Assign participants to work on projects that apply ITKS principles to real-world problems.
  - Encourage innovation and creativity in project development.

## Evaluation Metrics

1. **Knowledge Gain:** Assess participants' understanding of ITKS concepts and principles.
2. **Application:** Evaluate the practical application of ITKS principles in participants' work or personal projects.
3. **Feedback:** Collect feedback from participants on the program's effectiveness and suggestions for improvement.
4. **Financial Sustainability:** Explore funding opportunities, grants, and partnerships to ensure the program's long-term sustainability.

## Implementation Strategy

### Training Subjects

Indian Knowledge Systems (IKS) encompass the rich and diverse knowledge traditions that originated in the Indian subcontinent, spanning thousands of years. IKS has had a profound impact on various fields, including Science and Technology, Philosophy and Spirituality, Medicine and Health, Arts and Literature and Environment and Sustainability. These systems include:

1. **Vedas:** Ancient scriptures containing knowledge on various subjects like philosophy, rituals, and sciences.
2. **Upanishads:** Philosophical texts exploring the nature of reality, self, and ultimate reality (Brahman).
3. **Ayurveda:** Traditional system of medicine emphasizing natural healing, wellness, and balance.
4. **Yoga:** Physical, mental, and spiritual practices for well-being and self-realization.
5. **Mathematics and Astronomy:** Significant contributions to the development of zero, decimal system, and astronomical observations.

These systems continue to inspire innovation, research, and cultural exchange, offering valuable insights into holistic living, sustainable practices, and human well-being.

### Potential Approaches

- 1) **Interdisciplinary Courses:** Develop courses that combine ITKS with modern subjects like science, technology, engineering, and mathematics (STEM). Also, to identify the topics related to ITKS in each subject being taken up in the academy. Few examples given below:
  - i) Traditional Agroforestry system- Land Use system in - Silviculture
  - ii) Methods of biodiversity conservation through traditional crop selection, seed savings and practices- BDCM
  - iii) Herbal and Ethnobotanical knowledge information on native plant species, uses for medicines, food and other products- Forest Utilization II
  - iv) Folk Pest and disease treatment method- Adverse influences on Forest
  - v) Traditional Water and soil conservation practices- NRM
  - vi) Climate resilient climate change techniques- BDCM
  - vii) Traditional Building Construction Techniques- Forest Engineering
  - viii) Tradition Legal System- Forest Policy and Law
- 2) **Project-Based Learning:** Encourage Officer Trainees and participants to work on projects that apply ITKS principles to real-world problems. Trainees may be assigned to take up projects during their field attachment. Further, certificate courses on
- 3) **Case Studies:** Use case studies to illustrate the applications of ITKS in modern contexts. Reading and writing assignments on the topics related to the ITKS in respective states shall be collected by the Officer trainees as a part of their course.
- 4) **Electives:** Topics/Activities related to Indian Traditional Knowledge System shall be introduced to the Officer Trainees in the academy. For more detailed understanding Officer trainees may choose subjects related to Indian Traditional Knowledge System as electives and also opt for certificate courses on these topics.

**5) Guest Lectures:** Invite experts in ITKS to deliver guest lectures and share their experiences.

- i) Vedic Maths
- ii) Ancient Tamil Knowledge in Management of Wetlands
- iii) Importance of Sacred Groves
- iv) Ayurveda and Medicinal Plants
- v) Siddha and Unani and Herbal Medicines for veterinary care
- vi) Traditional Knowledge – Intellectual Property & People's Rights

**6) Digital Resources:** Develop digital resources, such as online courses, iGoT self-learning modules/videos, and YouTube like apps, to make ITKS more accessible. Indian Knowledge Systems (IKS) is an innovative cell under Ministry of Education (MoE) at AICTE, New Delhi. It is established to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications. Knowledge repository on Indian Traditional Knowledge system is available in its website <https://iksindia.org/lectures-and-videos.php> for ready reference. Details of the courses and reference available is **Annexed** for ready reference.

Some course that has been identified in i GoT Self learning modules are given below:

- i) Indian Knowledge Systems and Environmental Sustainability by National Academy of Defense Production (NADP) Nagpur (1-hour 18mins)
- ii) Indian Knowledge System in Governance: A value Based Approach by Dept of Telecommunication (1 hour 46 mins)
- iii) Folk & Minor Art in India by IIT Kanpur (1 hour 12 mins)
- iv) Holistic Harmony: AYUSH approaches for Wellbeing by National Academy of Defense Production (NADP) Nagpur (1-hour 21 mins)
- v) Yoga Break at Workplace by Morarji Desai Institute of Yoga (27 mins)

**7) Learning during study tours**

Concerned Officer in-charge (Tours) shall identify and include at least one traditional knowledge system existing in the region of visits while preparing the tour programme.

A few examples are shown below:

- i) Irula Tribes and their traditional knowledge in snake handling and venom collection during South India Tour
- ii) Boma techniques of Wild animal capture during Central India Tour
- iii) Jallikattu during South India Tour/ special field visit
- iv) Visiting Traditional water harvesting structures in Rajasthan include Kund (or Tanka) and Johad, which capture and store rainwater.
- v) Endangered species conservation in Sacred Groves - in Karnataka, Tamil Nadu, Kerala, etc.
- vi) Apatani tribe's integrated rice-fish farming
- vii) Folk medicine/Naati Vaidhya /Visha Vaidhyas
- viii) Conservation of biodiversity by Indigenous communities-Plants protected in their natural habitat and possess healing properties

- ix) Visit to FRLHT, Bangalore to study traditional knowledge as the basis of the Indian System of Medicine (Ayurveda, Siddha, Unani, Homeopathy)
- x) Khazan lands-Traditional wetland fishing in Goa
- xi) Half day module at Indian Knowledge Systems (IKS) Ministry of Education (MoE), AICTE, New Delhi.

## **8) Special modules**

- I) Medicinal Plants Conservation and Utilization at TDU, Bangalore
- ii) Ethno-veterinary practices for animal healthcare
- 9) Conducting in house celebrations during Saturday and Sundays:** At least 4-6 events shall be conducted by the course in a year as identified by the Vice President Officers Club
  - i) Bharatanatyam/Kuchipudi/Kathakali/Folk dance/Lambani/Lavani dance
  - ii) Celebration of food festivals and incorporation of regional foods in menu of officer's trainees mess and Observing Cultural feasts
  - iii) Observing various regional festivals like Pongal, Deepawali, Holi, Dusshera, etc
  - iv) Exhibition of Famous Quotes & Traditional art corner to infuse the awareness among trainees and participants

## **Occasions for observing IKS in the academy**

|                                    |     |
|------------------------------------|-----|
| 1. Academy Day                     | -   |
| 2. Fresher's Day                   | -   |
| 3. Farewell Day                    | -   |
| 4. Makara Sankranti /Pongal/ Lohri | Jan |
| 5. Republic Day                    | Jan |
| 6. Mahashivaratri                  | Feb |
| 7. Holi (Festival of Colours)      | Mar |
| 8. Independence Day                | Aug |
| 9. Ganesh Chaturthi                | Aug |
| 10. Raksha Bandhan                 | Aug |
| 11. Diwali (Festival of Lights)    | Oct |
| 12. Dussehra (Vijayadashami)       | Oct |
| 13. Constitutional Day             | Nov |
| 14. Christmas                      | Dec |

## **10) Providing special exposure by earmarking sessions in PT and Games**

- I) Exposure on Silambam- the traditional self-defence technique from Tamil Nadu
- ii) Exposure on Yoga, Harit Yoga and Meditation

This SOP outlines a comprehensive framework for implementing the ITKS training program. With careful planning and execution, this program can promote awareness and understanding of India's rich cultural heritage and traditional knowledge system. By integrating ITKS with modern education systems, we can create a more inclusive, holistic, and relevant learning experience for officer trainees and participants.



## **CENTRAL ACADEMY FOR STATE FOREST SERVICE**

Ministry of Environment, Forest & Climate Change  
Coimbatore, Tamil Nadu

Tel : 0422-2450313 / E-mail : casfos-coimbatore@gov.in

Stay connected with us:



Twitter@casfoscbbe



Youtube - CASFOS Coimbatore



Instagram@casfoscbbe



Facebook@cbecasfos