Wildlife Forensics Training Programme

CSIR-CCMB is devoted to R&D activities, technology support and academic including Skill Training/HR) for the benefit of Biological and Applied Sciences in the country. The pioneering work of CCMB on the development of ‘Universal Primer Technology’ (Verma and Singh, 2001; USA Patent 7141364 and 10 other patents) for species identification to satisfy legal evidence requirements in the court of law has become a boon for wildlife forensics. This technology is indeed the base for any of the DNA-based identification system world-wide and it is being used in India since last 16 years on a regular basis by various courts, judiciary, police and wildlife departments in cases pertaining to wildlife crime. This invention has been stated in our parliament, duly earned recognition by various national awards and international acclaim in various forms and has been used in more than 1300 cases till date in India.

To address the question of species identification in the cases pertaining to wildlife crime, food and meat authentication and export and import regulations every personnel involved in the investigation require at least a basic level of understanding of the principles and practices of wildlife forensics, in particular the sample collection, storage, sealing, forwarding etc as well as the basics of DNA-based species identification and authentication system. Due to absence of any hands-on training facility in the country on these applications, the skills of relevant personnel still need to be updated for both, the trainee as well as working/senior officers. CCMB offers the following course on Wildlife forensics.

Duration : 3-days (4 No.s/year) and 1-week (2 No.s/year) hands-on training module and 8 week (Advanced) hands-on training (1 No./year)

No. of seats : Maximum 30 per batch for each 3-days training modules, maximum 10 per batch for 1-week training module and maximum 10 per batch for advanced certification course

Education Qualifications : Working Officers: Any officer working in wildlife and forest departments, Police, coast guard, postal and telegraph customs, central excise, Food safety authentication department, judiciary, law enforcement department, academic institution, university or a research laboratory

Age group : Students - B.Sc. degree holders and above; No Age bar for Officers; 18 Years and above for students

Date of Commencement : 25th September 2017

Venue of the Course : LaCONES; Annexe-I, CSIR-CCMB

Course Fee : Rs 10,000/- for 3-days hands-on training module Rs 20,000/- for 1-week training module; Rs 50,000/- for 8 weeks advanced course
Residential/non-residential: Residential (Officers opting for star accommodations have to do their own arrangements)

Sponsorship: Government departments, Ministries, National bodies, Organizations, Authorities as well as established industrial houses / institutions and Universities are welcome to sponsor candidates of their interest. In the selection modality, a special weightage will be provided to the candidates sponsored by established industries and Government organizations.

Training Curriculum:

3 days
- Understanding DNA, DNA technology and its applications including wildlife forensics
- Status of Wildlife crime in India and abroad
- Case Studies from LaCONES, CSIR-CCMB
- Demonstration of collection, preservation, packaging and transportation of biological samples collected in the field (SOP)
- Isolation of DNA from various type of biological samples
- Quantification of DNA by spectrophotometric and in-gel methods
- Provide knowledge about the “Universal Primers” technology for Species Identification developed by CCMB.
- PCR amplification of the DNA isolated from various type of biological samples
- Sequencing and Data analysis of PCR products for Species Identification from various type of biological samples
- Troubleshooting
- Report preparation
- Impart knowledge about the legal application and implication of the DNA analysis report generated

1 week
- Understanding DNA, DNA technology and its applications including wildlife forensics
- Status of Wildlife crime in India and abroad
- Case Studies from LaCONES, CSIR-CCMB
- Demonstration of collection, preservation, packaging and transportation of biological samples collected in the field (SOP)
- Isolation of DNA from various type of biological samples
- Quantification of DNA by spectrophotometric and in-gel methods
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- PCR amplification of the DNA isolated from various type of biological samples
- Sequencing and Data analysis of PCR products for Species Identification from various type of biological samples
- Understanding the use Microsatellite markers and Sex specific markers for individual identification, relatedness, sexing and repatriation
- PCR amplification using single/multiplex markers
- Genotyping and scoring of alleles: DNA profiling
- Data analysis for individual identification, relatedness, sexing and repatriation
- Troubleshooting
- Report preparation
- Impart knowledge about the legal application and implication of the DNA analysis report generated
Salient Features of the Training:

- 50% Theory and 50% practical sessions as per the course curriculum.
- Tutorials (personal attention)
- Lectures, assisted with multimedia aids
- Case studies
- Group discussions
- Hands-on practical experience on the state-of-the-art laboratory techniques on DNA-based investigation of wildlife crime, equipment/machinery and basic computational skills
- LaCONES visit
- Assignments
- Critical analysis of DNA-based reports (special session for judicial officers, judges and public and private prosecutors)
- Legislations and acts pertaining to wildlife and forest management (special sessions by law experts)
- Certificate will be issued to the successful candidates.