# An insight and spatiotemporal analysis of the establishments involved in animal experiments in India

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**Abstract**

The establishments registered with the Committee for Control and Supervision of Experiments on Animals (CCSEA), Good Laboratory Practice (GLP) certified, and AAALAC International accredited were obtained from online sources. The spatial distribution map of the establishments was prepared by collecting latitude and longitude using Quantum Geographic Information System (QGIS) version 3.4 Madeira, an open-source software. The establishments registered with CCSEA, GLP certified, and AAALAC accredited in India were 1583, 52, and 28, respectively and the period was confined to 1999 to 2023. Based on the organization nature, more private establishments were registered with CCSEA [1132], GLP [48], and AAALAC International [28] than Government establishments. The type of animals used for animal experiments by the establishments revealed that the small animals were in CCSEA [91.5%], GLP [68%], and AAALAC International [71%] compared to large animals. Based on the breeding purpose, establishments carrying in-house breeding were in CCSEA [79%], GLP [71%], and AAALAC International [70%]. The purpose of registration showed a higher number of establishments with educational purposes for CCSEA, and contract establishments for GLP and AAALAC International. The state-wise analysis revealed a higher number of establishments registered with CCSEA, GLP certified, and AAALAC International accredited were in Maharashtra, Telangana, and Maharashtra, respectively. The goals of CCSEA, GLP, and AAALAC International are to enhance the animal well-being and quality of animal experiments, improve laboratory animal facility standards, and enhance biological research on humans and animals. Further, there is a need for a good monitoring system for the establishments involved in animal experiments in India.

***Keywords*** **-** Animal experiments, AAALAC International, CCSEA, GLP, India.

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***To cite****; P Krishnamoorthy and H K Lakshmi (2024) An insight and spatiotemporal analysis of the establishments involved in animal experiments in India JLAS 7(2), pp 24-41*

*Received -3-01-24* *Revised 22-01-2024* *Accepted 09-03-2024*

## Introduction

Laboratory animals have been used in numerous animal experiments in earlier studies and may also be in the future. The research and development in science have reached greater heights, in which animal studies played a pivotal role. The competence of biomedical scientists is to augment the well-being of humans and animals, which depends directly on the innovations made possible by research, much of which needs the experimental animal's usage. Animal experimentation means to demonstrate animal usage in educational, training, and research trials (Badyal and Desai, 2014). The animals used in research purposes have significantly increased the scientific knowledge base and helped human beings in numerous aspects. Research on animals, experiments on animals, *in vivo* studies, and vivisection are the terms frequently used interchangeably (Krishnamoorthy and Karthika, 2022). Recently, the animals used in research have been globally acknowledged. This might be due to the establishment of pharmaceutical companies, Contract Research Organizations (CROs), and research organizations in various fields of science. However, animal usage in teaching, testing, and research has various difficulties including animal handling, source of animals, animal experiments involving pain, animal testing outcomes, animal welfare, and biodiversity issues, environmental concerns, etc. Hence, a lot of ethical questions are raised in animal experimental studies involving pain and undue stress which is considered disadvantageous to the welfare of the animals and needs justification for the same. In addition, animal handling differs with various individuals in each animal facility, research, and academic institution. Animals are experiencing painful processes while imparting education and skill development as reported (Badyal and Desai, 2014). There is a need for change in researchers' behaviors regarding animal use and caring for experimental laboratory animals in India. Further, it might be attained by better training and the combination of the 3Rs concepts in biomedical and animal research (Pratap and Singh, 2016)

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The Committee for Control and Supervision of Experiments on Animals (CCSEA) is a statutory committee under the Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, New Delhi formed by the Indian Parliament under the Prevention of Cruelty to Animals (PCA) Act 1960. CCSEA was started in 1964, and it was restored in 1998, under the devoted chairperson of Smt. Maneka Gandhi. Initially, the CCSEA was under the Ministry of Statistics and Programme Implementation and then moved to the Ministry of Environment, Forest and Climate Change. The CCSEA committee is composed of members from scientific researchers, authorities from regulatory bodies, and animal welfare activists. The CCSEA works with an excellent network of volunteers who coordinate with the institutes laboratories or establishments involved in animal experiments (Pereira et al., 2004). In addition, CCSEA sets rules and regulations for experimentation on animals and approval for the animal house facilities. The registration of a facility having an animal house with CCSEA is a must for conducting animal experiments in India and will be renewed every five years. The main objective of CCSEA is to safeguard that animals are subjected to unnecessary pain or suffering before, during, or after the performance of experiments on them. For this reason, the Committee formulated the 'Breeding of and Experiments on Animals (control and Supervision) Rules 1998, which were amended in 2001 and 2006, to regulate the experimentation on animals (CPCSEA, 2022). The Institutional Animals Ethics Committee (IAEC) is formed in all establishments, which is authorised to approve project proposals involving experiments on small animals only and advises researchers on animal use for research protocols. This committee is accountable for ensuring alternatives, comprising exploration of non-animal options and essential pain management provided without obstructing the study (Badyal and Desai, 2014).

Good Laboratory Practice (GLP) is a well-established global standard and quality management system that ensures both the integrity and the reproducibility of toxicological studies. GLP is a system, which has been developed by Organisation for Economic Co-operation and Development (OECD). GLP was first established in New Zealand and Denmark in 1972, and later in the United States of America (USA) in 1978 in reaction to the Industrial Bio-Test laboratory scandal. In addition, the GLP encompasses the total ethical aspects involved in the animal experiments such as the design of the study, guidelines on ethics, ethical approval, size of the sample (number of animals), schedule of treatment, doses, routes of administration, experimental methodology, acquisition and analysis of data, and reporting and recording of all the procedures involved in experiments. The documentation of the experiments was an important part of the GLP certification (GLP, 2022). In India, the National GLP Compliance Monitoring Authority was instituted by the Department of Science and Technology (DST), Government of India on 24th April 2002.

AAALAC International is a private, non-profit organization that endorses the humane treatment of laboratory animals in research through voluntary accreditation and assessment programs. In the 1950s, the Professional Standards Committee of the Animal Care Panel (ACP), now the American Association for Laboratory Animal Science (AALAS), identified the need to convince the public that laboratory animal research was performed with professional ethics, and the standard methods were considered. This concept represents the start of the effort to form an accreditation program for laboratory animal care and use. The AAALAC International accredited many hundreds of organizations across the USA, which has a higher benchmark for laboratory animal care to new horizons. Currently, nearly 900 private companies, academic universities, medical hospitals, government establishments, and other research institutions in 50-plus countries have been accredited by the AAALAC International, showing their commitment to reliable animal care and use (AAALAC, 2022). However, there is no literature available for the spatiotemporal analysis of the establishments registered with CCSEA, GLP, and AAALAC. Hence, an attempt was made to do the spatial and temporal analysis of establishments in India involved in animal experiments and analysis based on year-wise, state-wise, animal-wise, breeding status, and the purposes of the registration of the establishments with CCSEA for better understanding and devising future strategies.

## Materials and Methods

The list of registered establishments was obtained from the website and the source URL was https://ccsea.gov.in/WRITEREADDATA/CMS/New_Institution_Registration_List_2023 .pdf. The list of GLP-certified establishments was obtained from the website and the URL source was *https://dst.gov.in/sites/default/files/Certified%20Test%20Facilities%20withTest%20Items%20and%20Test%20Systems%20181020 22.pdf.* The AAALAC International accredited establishments in India were obtained from the website and the URL was *https://www.aaalac.org/accreditation-program/directory/directory-of-accredited-organizations -search-result/?nocache=1#adv_acc_ dir_search*. The data from different sources of the CCSEA registered, GLP certified and AAALAC International accredited establishments were entered on the Microsoft Excel Forms. The data from CCSEA comprises registration number, year of registration, state of the establishments, nature of establishments, animal types, breeding status, and registered establishment with the address. The nature of registered establishments includes government and private and the type of animals includes small and large animals. The breeding status comprises in-house and trade breeding and the purpose of registration includes academic, contract, education, education and contract, research, and research and contract. The registered establishments with CCSEA in India were 1906, the 323 deregistered

establishments were removed, and finally, the present establishments registered with CCSEA were 1583. The GLP-certified and AAALAC International-accredited establishments in India were 52 and 28, respectively. These establishments were segregated into year-wise, state-wise, organization nature, animal type-wise, breeding status, and purpose of registration based on CCSEA registration. The latitude and longitude of each registered establishment were obtained in degree decimal format by using Google Maps (https://www.google.com/maps). The spatial distribution map of the establishments registered with CCSEA, GLP certified, and AAALAC accredited was prepared based on the latitude and longitude and by using Quantum Geographic Information System (QGIS) version 3.4 Madeira, an open-source software *(https://blog.qgis.org/2018/10/28/qgis-3-4-madeira-is-released/)*. The temporal distribution was done based on the year of registration. The number of establishments obtained based on the year and state were used for calculating the percentages.

## Results

### *CCSEA Registered Establishments*

The spatial distribution of the establishments registered with CCSEA from Government and Private sectors is shown in **Figure 1**. The total number of establishments registered with CCSEA was found to be 1583. The year-wise distribution of the establishments registered with CCSEA based on the organization's nature, types of animals, and breeding purpose was given in **Table 1**. The CCSEA-registered establishments during the period 1999 to 2023 were considered for analysis. Based on the organization's nature, private establishments [71.5%] were more when compared to the government [28.5%]. The number of establishments [128] registered with CCSEA based on the organization's nature was higher in 1999 than in the other years. During 1999, the number of private establishments [68] registered with CCSEA was higher when compared to Government establishments [60]. The number of government establishments registered was higher during 1999 [13.3%] and 2001 [12.9%] and private establishments were registered during 2011 [9.9%] with the CCSEA, New Delhi. The type of animals revealed more establishments were registered for using small animals [1561] than the large animals [145]. Based on the breeding status, in-house breeding [422] establishments are higher when compared to establishments registered under breeding for trade purposes [111]. The year-wise distribution of the establishments based on the purpose of registration with CCSEA is presented in **Table 2.** Based on the registration purposes, a higher number of establishments registered for education [1191] followed by contract [223], research [164], academic [46], education and contract [26], and least in research and contract [9]. During the year 1999, the contract [15.7%], education and contract [26.9%], and research [11%] based registered establishments were higher in numbers. During 2011, the academic [26.1%] and education [9.2%] and in 2021, research and contract [22.2%] based establishments were registered more in numbers.

The state-wise distribution of the establishments registered with CCSEA is given in **Table 3**. In India, almost all the states and union territories have establishments registered with CCSEA except for Ladakh, Lakshadweep, and Manipur. The number of establishments registered with CCSEA was higher in Maharashtra [15.3%], followed by Karnataka [10.6%], Tamil Nadu and Telangana [9.7%], Uttar Pradesh [8%], and Gujarat [7%], and a smaller number of establishments registered in Andaman and Nicobar, Arunachal Pradesh, Dadra and Nagar Haveli, and Nagaland [0.1%]. Based on the nature of the organization, the government establishments were registered more in Maharashtra and Tamil Nadu [10.2%] and private establishments [17.3%] were registered in the Maharashtra state. Both small [15.2%], large [14.5%] types of animals and inhouse [18%] and trade breeding [18.9%] based establishments were registered more in number from Maharashtra state than the other states in India. The state-wise establishments distribution based on the

purposes of CCSEA registration are presented in **Table 4.** Based on the purpose of registration, under the academics- Tamil Nadu [21.7%], contract- Telangana [22.9%], education- Maharashtra [14.8%], education and contract- Tamil Nadu [26.9%], research- Telangana [11%], and research and contract- Maharashtra [22.2%] registered the highest number of establishments with CCSEA.

***GLP Certified Establishments***

The spatial distribution of the establishments in India certified by GLP from Government and private organizations is depicted in **Figure 2.** The total number of establishments registered with GLP is found to be 52. The state-wise distribution of the establishments certified by GLP is given in **Table 5.** In India, 12 states and two union territories were registered with GLP. The number of establishments registered with GLP was more in Maharashtra [21%], followed by Gujarat [15%], Karnataka and Telangana [13%], Tamil Nadu [10%], Haryana and Uttar Pradesh [6%], Rajasthan [4%] and each establishment in Andhra Pradesh, Delhi, Goa, Puducherry, Punjab, and West Bengal. Based on the organization's nature, the private establishments [48] were registered more with GLP when compared to the government [4]. The private GLP-certified establishments were higher in Maharashtra [11], followed by Gujarat [8], Karnataka and Telangana [7], Tamil Nadu [5], and more government establishments registered in Uttar Pradesh [2]. The type of animals showed that small animal [68%] type establishments were registered more with GLP than large animals [31%]. Based on the breeding status, in-house breeding [70%] establishments were higher when compared to trade breeding [30%]. Based on registration purposes, the contract [92%] establishments GLP certified was higher followed by education, education, and contract [4%]. The contract-based GLP-certified establishments were more in Maharashtra [10], followed by Gujarat [8], Karnataka and Telangana [7], and Tamil Nadu [5]. The GLP-certified establishments mostly follow the regulatory requirements for animal experimentation and revolve around documentation.

***AAALAC International Accredited Establishments***

The India map representing the spatial distribution of the AAALAC-accredited establishments is depicted in **Figure 3.** The total number of establishments accredited by AAALAC International was 28 in number. Based on the organization's nature, all the AAALAC-registered establishments were private. During 1999, more the number of private establishments were accredited with AAALAC International. The type of animals showed that the small animal type [71%] establishments were accredited more in number than the large animals [29%]. Based on breeding status, the inhouse breeding establishments [70%] were more than the trade breeding [30%], and a larger number of inhouse breeding establishments [7] were accredited in 1999 and trade breeding [2] establishments during 2015. The purpose of registration showed that contract [96%] based accreditation was more in number than the education [4%] and contract-based establishments [7] during 1999. The state-wise distribution of the AAALAC-accredited establishments is presented in **Table 6.** In India, establishments in seven states were accredited with AAALAC. A higher number of establishments with AAALAC accreditation was observed in Telangana [36%], followed by Karnataka [25%], Gujarat [14%], Maharashtra [11%], West Bengal [7%] and one each in Tamil Nadu and Uttar Pradesh. Based on the type of animals in states, the small animal type [71%] accredited establishments were higher than the large animal [29%] and more small type accredited establishments were present in Telangana state. Based on CCSEA registration purposes, the contract [27] based establishments AAALAC accredited more than the education [1]. A larger number of contract establishments [10] were present in Telangana and least in Tamil Nadu and Uttar Pradesh. The spatial distribution of the establishments registered with CCSEA, GLP, and AAALAC in Maharashtra and Telangana states are depicted in **Figure 4** for a better comparison of the spatial locations. Most of the establishments are located in the

capital region and are aggregated together mostly.

## Discussion

The basic information on the CCSEA-registered, GLP-certified, and AAALAC-accredited establishments in India is provided in the present study. All the establishments or organizations involved in animal experiments should registered and the animal house facility has to be approved by CCSEA, New Delhi. The main functions of the CCSEA are the registration of the organizations conducting animal experiments or breeding of animals, the selection and appointment of nominees for the IAEC of the registered establishments, the approval of laboratory animal house facilities, and granting permission for conducting experiments in large animals (CPCSEA, 2023). The principles of 3R's include reduction, replacement, and refinement should be followed while planning and implementing teaching and research studies on animals. The CCSEA has 1,583 registered establishments or organizations which perform animal experiments in India. Currently, 571 pharmacy colleges, 392 research institutes, 292 medical colleges, and 214 academic institutions, that use animals for research or regulatory approvals, have been registered with CCSEA. The sustained efforts of CCSEA in organizing regular national conferences, regional workshops, and trainings for CCSEA nominees, also facilitated the awareness among the researchers and faculties involved in animal experiments in India. For each registered institute/establishment/organization, the nominees were appointed by the CCSEA to manage the successful application of CCSEA guidelines and animal welfare at the establishment level and approval of the projects involving animal experiments. There is an urgent need for better monitoring of animal experiments after approval by IAEC members in the establishments/ organizations conducting animal experiments. The IAEC members should monitor the animal welfare involved in the animal experiments regularly during the experimentation period (Krishnamoorthy and Karthika, 2022). The GLP certification is for the testing laboratories, ensuring the good quality of operations by the organizations involved in animal toxicity studies. Currently, 52 GLP-certified facilities are carrying on toxicity studies and are involved in animal experiments in India. The AAALAC also encourages responsible animal experiments in research through an accreditation program, which is voluntary. Currently, a total of 28 AAALAC-accredited establishments are present in India. The number of private establishments registered with CCSEA, GLP certified and AAALAC International accredited was higher than the Government establishments. This is an encouraging sign for animal experiments in India and these establishments provide better clinical trials for the industries involved in pharmaceutical, biotechnology, and medicine. All the accredited establishments with AAALAC International are private. This could be due to the fact since it's an international voluntary accreditation and cost-intensive, therefore government establishments can't afford the huge amount for AAALAC accreditation. During 1999, more establishments were registered with CCSEA, since initial registration started in 1999 and later 126, 116, and 108 establishments were CCSEA registered during 2011, 2002, and 2001, respectively. Based on the type of animals, the establishments conducting experiments on small animals were more in number than the establishments using large animals. All the registered establishments were carrying out the experiments on small animals mainly, and later conducting experiments on large animals, if required. The reason for the smaller number of large animals used in animal experiments is due to the requirement of large animals is less, it is cost-intensive, and mainly the ethical concerns towards the large animals in India. The state-wise analysis showed that more establishments registered with CCSEA and GLP certified were present in Maharashtra and when combining both Andhra Pradesh and Telangana states (without state separation) the number of establishments was more than the Maharashtra state. A higher number of establishments accredited with AAALAC International were present in Telangana. This

might be because these states are leading industrial states and have good state policies, communication facilities, and demand for conducting animal experiments. The number of registered establishments with CCSEA was less in Arunachal Pradesh, Dadra Nagar Haveli, and Nagaland. The states having the least registered establishments require awareness and emphasis on animal experiments in the future. The breeding status showed that the establishments with in-house breeding were registered more with the CCSEA, GLP, and AAALAC than the breeding for trade. Based on registration purposes, more educational establishments were registered with the CCSEA. The more number of contract establishments were GLP certified and AAALAC accredited. The contract research establishments play a vital role in research and discovery and back the pharmaceutical industries and biotechnology companies in the form of contract out services on pharmaceutical research in India. The data generated from animal experiments are very vital in the development of safety data, new drugs, and use in animal and human disease diagnosis and treatments.

The CCSEA is unique, which has supported the formation of a common stage of discussion for scientists and animal activists on the topics of humane and advanced solutions for the usage of animals in experimentation (Pereira and Tettamanti, 2005). The continued hard work of the CCSEA by conducting regular trainings or workshops or courses such as Certificate Course in Laboratory Animal Science, as per the Federation for Laboratory Animal Science Associations standards and to promote awareness among the researchers and personnel involved in animal experiments in India (Bayne et al., 2015). The GLP certification plays an important role in the progress in the economy of the country. The number of GLP-certified testing facilities mainly CROs shown an increasing trend, since India has attained the status of a full adherent to mutual acceptance data by OECD guidelines (Kapoor et al., 2021). The AAALAC International accreditation is a commitment to continuous improvements in animal welfare, promotes scientific validity, demonstrates accountability, facilitates funding, and provides assurance in a global marketplace. It also denotes excellent compliance and care for animals, the accreditation is considered to be an advantage for testing facilities in securing contracts and grants from both private and governmental organizations (Goodman et al., 2015). The AAALAC considers several standards including the application of 3R's in the animal's use in research or science in the on-site assessments of animal care and use programs (Bayne et al., 2015). Animal testing is still crucial for toxicity studies, drug carcinogenicity, and behavioral studies, even though a combination of the latest *in vivo* and *in vitro* methods is possible. The alternatives for some of the pharmacokinetic studies involving new chemical entities are possible. There should be diverse approaches and models available to partially or completely replace animals in pharmacological research and education soon. Laboratory supervisors should be held officially responsible for the treatment and care of animals at their institutions or establishments (Krishnamoorthy and Karthika, 2023). Before, during, and after animal experimentation, the expenditure involved in healthier management of animals in all these three situations, should be included in the project proposal or contract research funds. The role of CCSEA and its nominees for better animal experimentation and good animal welfare is very important. Further, there is a necessity for continuous monitoring of animal experiments in India by CCSEA in the future.

## Conflicts of interest

Authors declare no conflicting interest

## Acknowledgments

The authors acknowledge with thanks the support of The Director, ICAR National Institute of Veterinary Epidemiology and Disease Informatics, Bengaluru, and The Member Secretary, CCSEA, New Delhi in conducting this work and preparing the manuscript.

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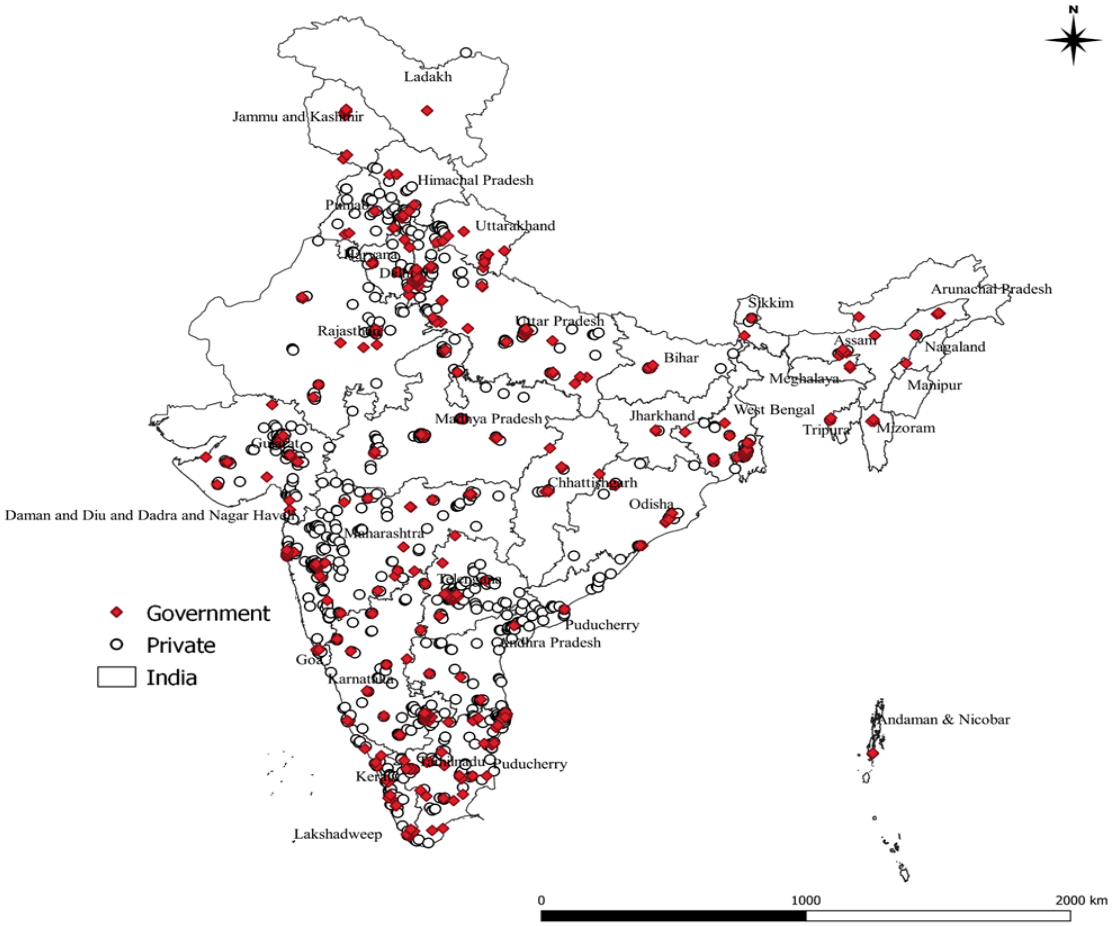


Fig 1. Spatial distribution of CCSEA registered establishment in India

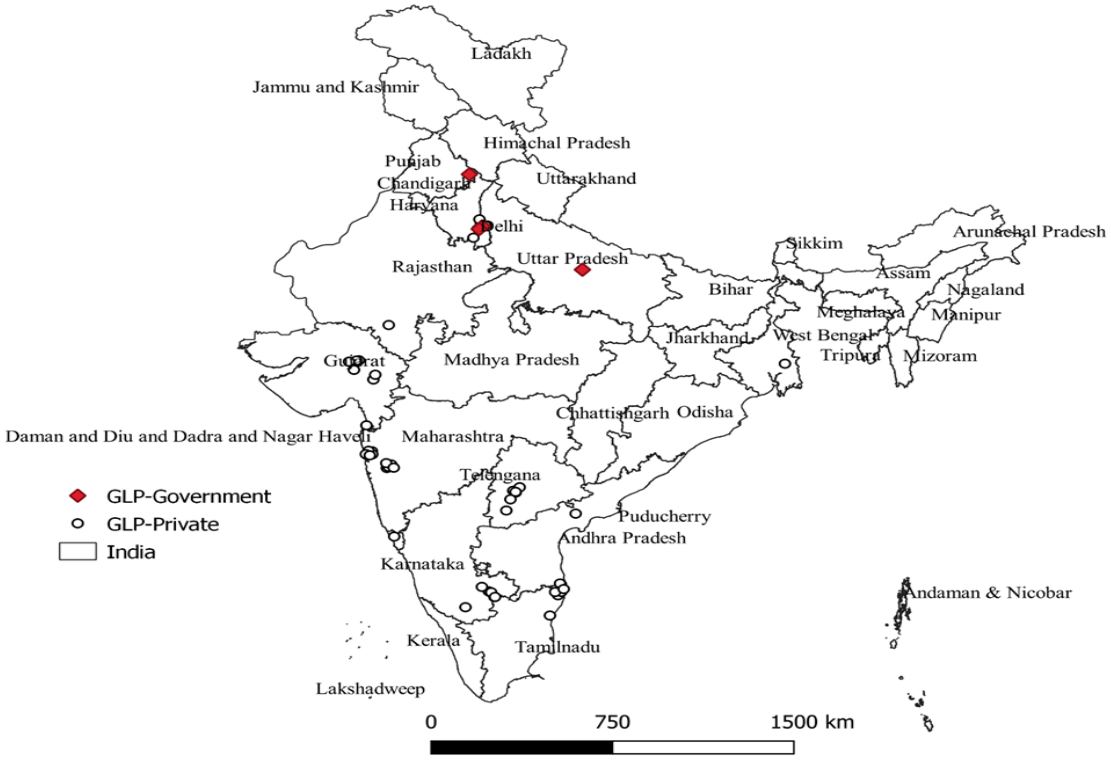


Fig 2. Spatial distribution of GLP registered establishment in India

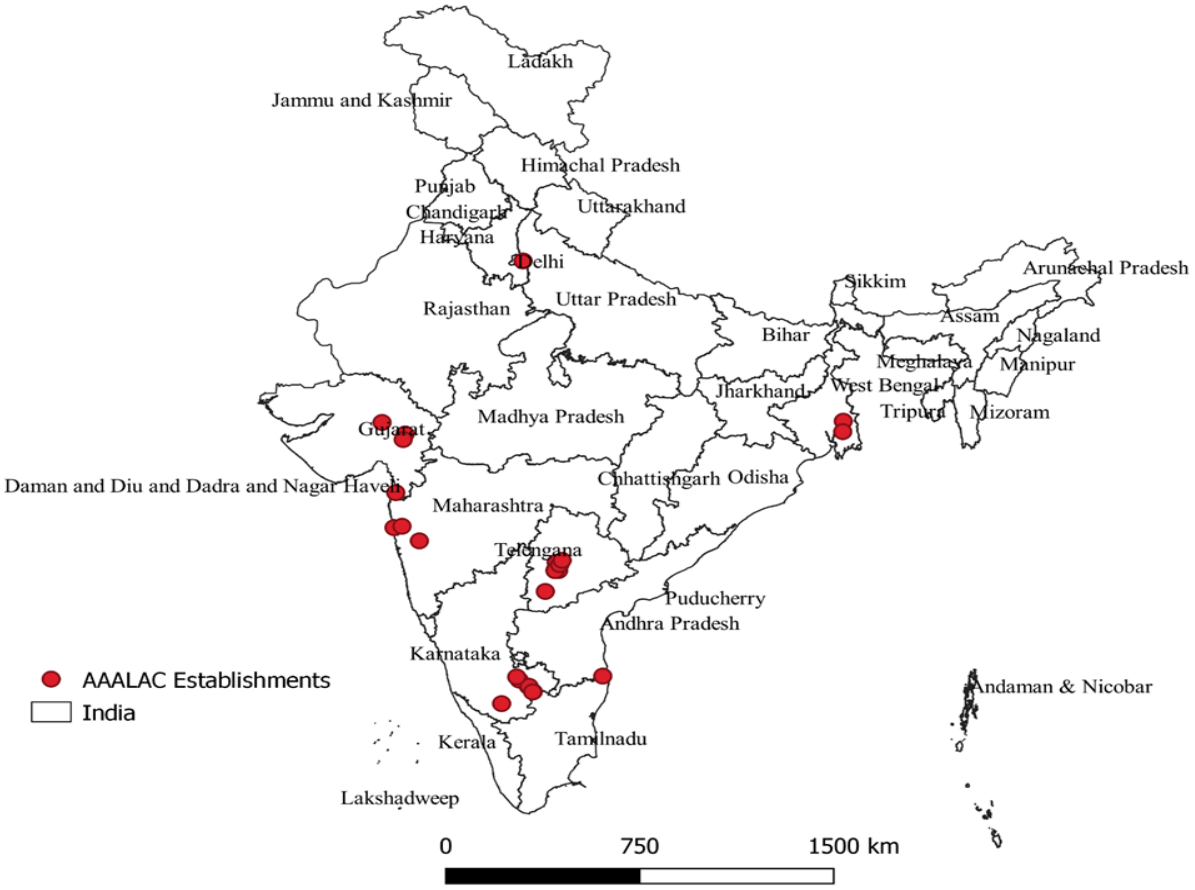


Fig 3. Spatial distribution of AAALAC registered establishment in India

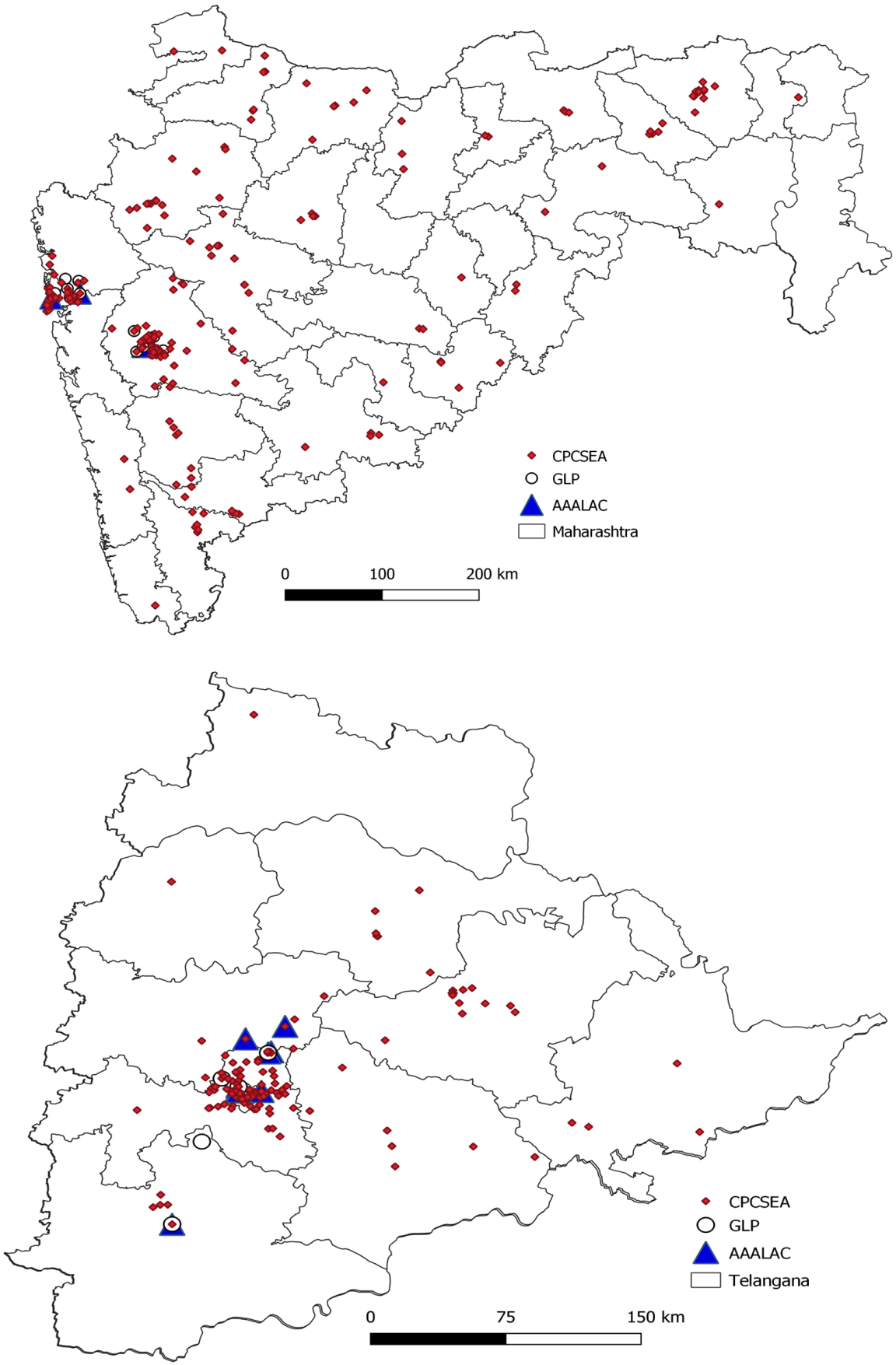


Fig 4. Spatial distribution of CCSEA registered, GLP certified and AAALAC accredited establishments in Maharashtra and Telangana states

Table 1. Year-wise distribution of the establishments registered with CCSEA

| No. | Year | Organization Nature | | | Type of Animals | | | Breeding purpose | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Government | Private | Total | Small | Large | Total | In house | Trade | Total |
| 1 | 1999 | 60 (13.3) | 68 (6.0) | 128 (8.1) | 128 (8.2) | 29 (22.0) | 157 (9.2) | 101 (23.9) | 16 (14.4) | 117 (22.0) |
| 2 | 2000 | 39 (8.6) | 47 (4.2) | 86 (5.4) | 85 (5.4) | 19 (13.1) | 104 (6.1) | 48 (11.4) | 6 (5.4) | 54 (10.1) |
| 3 | 2001 | 58 (12.9) | 50 (4.4) | 108 (6.8) | 106 (6.8) | 17 (11.7) | 123 (7.2) | 46 (10.9) | 3 (2.7) | 49 (9.2) |
| 4 | 2002 | 41 (9.1) | 75 (6.6) | 116 (7.3) | 115 (7.4) | 10 (6.9) | 125 (7.3) | 22 (5.2) | 3 (2.7) | 25 (4.7) |
| 5 | 2003 | 18 (4.0) | 24 (2.1) | 42 (2.7) | 42 (2.7) | 4 (2.8) | 46 (2.7) | 8 (1.9) | 2 (1.8) | 10 (1.9) |
| 6 | 2004 | 7 (1.6) | 26 (2.3) | 33 (2.1) | 33 (2.1) | 1 (0.7) | 34 (2.0) | 6 (1.4) | 5 (4.5) | 11 (2.1) |
| 7 | 2005 | 7 (1.6) | 28 (2.5) | 35 (2.2) | 35 (2.2) | 1 (0.7) | 36 (2.1) | 5 (1.2) | 2 (1.8) | 7 (1.3) |
| 8 | 2006 | 9 (2.0) | 53 (4.7) | 62 (3.9) | 62 (4.0) | 1 (0.7) | 63 (3.7) | 6 (1.4) | 2 (1.8) | 8 (1.5) |
| 9 | 2007 | 12 (2.9) | 57 (5.0) | 69 (4.4) | 69 (4.4) | 2 (1.4) | 71 (4.2) | 9 (2.1) | 2 (1.8) | 11 (2.1) |
| 10 | 2008 | 5 (1.1) | 73 (6.4) | 78 (4.9) | 78 (5.0) | 3 (2.1) | 81 (4.7) | 10 (2.4) | 3 (2.7) | 13 (2.4) |
| 11 | 2009 | 6 (1.3) | 46 (4.1) | 52 (3.3) | 51 (3.3) | 5 (3.4) | 56 (3.3) | 10 (2.4) | 3 (2.7) | 13 (2.4) |
| 12 | 2010 | 9 (2.0) | 57 (5.0) | 66 (4.2) | 66 (4.2) | 3 (2.1) | 69 (4.0) | 7 (1.7) | 2 (1.8) | 9 (1.7) |
| 13 | 2011 | 14 (3.1) | 112 (9.9) | 126 (8.0) | 125 (8.0) | 3 (2.1) | 128 (7.5) | 10 (2.4) | 3 (2.7) | 13 (2.4) |
| 14 | 2012 | 13 (2.9) | 46 (4.1) | 59 (3.7) | 59 (3.8) | 3 (2.1) | 62 (3.6) | 11 (2.6) | 5 (4.5) | 16 (3.0) |
| 15 | 2013 | 7 (1.6) | 39 (3.4) | 46 (2.9) | 44 (2.8) | 4 (2.8) | 48 (2.8) | 7 (1.7) | 2 (1.8) | 9 (1.7) |
| 16 | 2014 | 8 (1.8) | 42 (3.7) | 50 (3.2) | 47 (3.0) | 6 (4.1) | 53 (3.1) | 12 (2.8) | 5 (4.5) | 17 (3.2) |
| 17 | 2015 | 14 (3.1) | 26 (2.3) | 40 (2.5) | 40 (2.6) | 2 (1.4) | 42 (2.5) | 14 (3.3) | 8 (7.2) | 22 (4.1) |
| 18 | 2016 | 20 (4.4) | 67 (5.9) | 87 (5.5) | 85 (5.4) | 3 (2.1) | 88 (5.2) | 11 (2.6) | 5 (4.5) | 16 (3.0) |
| 19 | 2017 | 18 (4.0) | 46 (4.1) | 64 (4.0) | 64 (4.1) | 2 (1.4) | 66 (3.9) | 7 (1.7) | 2 (1.8) | 9 (1.7) |
| 20 | 2018 | 23 (5.1) | 29 (2.6) | 52 (3.3) | 52 (3.3) | 3 (2.1) | 55 (3.2) | 14 (3.3) | 4 (3.6) | 18 (3.4) |
| 21 | 2019 | 14 (3.1) | 26 (2.3) | 40 (2.5) | 37 (2.4) | 6 (4.1) | 43 (2.5) | 16 (3.8) | 7 (6.3) | 23 (4.3) |
| 22 | 2020 | 11 (2.4) | 19 (1.7) | 30 (1.9) | 29 (1.9) | 4 (2.8) | 33 (1.9) | 8 (1.9) | 7 (6.3) | 15 (2.8) |
| 23 | 2021 | 7 (1.6) | 19 (1.7) | 26 (1.6) | 23 (1.5) | 2 (1.4) | 25 (1.5) | 7 (1.7) | 5 (4.5) | 12 (2.3) |
| 24 | 2022 | 22 (4.9) | 38 (3.4) | 60 (3.8) | 60 (3.8) | 7 (4.8) | 67 (3.9) | 19 (4.5) | 5 (4.5) | 24 (4.5) |
| 25 | 2023 | 9 (2.0) | 19 (1.7) | 28 (1.8) | 26 (1.7) | 5 (3.4) | 31 (1.8) | 8 (1.9) | 4 (3.6) | 12 (2.3) |
| Total | | 451 (28.5) | 1132 (71.5) | 1583 (100.0) | 1561 (91.5) | 145 (8.5) | 1706 (100.0) | 422 (79.2) | 111 (20.8) | 533 (100.0) |

Note: Values in parenthesis are in percentages.

Table 2. Year-wise distribution of the establishments based on purpose of registration with CCSEA

| No. | Year | Purpose of CCSEA Registration | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Academic | Contract | Education | Education and contract | Research | Research and contract | Total |
| 1 | 1999 | 0 (0.0) | 35 (15.7) | 67 (5.6) | 7 (26.9) | 18 (11.0) | 1 (11.1) | 128 (7.8) |
| 2 | 2000 | 1 (2.2) | 13 (5.8) | 57 (4.8) | 3 (11.5) | 10 (6.1) | 2 (22.2) | 86 (5.2) |
| 3 | 2001 | 0 (0.0) | 6 (2.7) | 86 (7.2) | 2 (7.7) | 14 (8.5) | 0 (0.0) | 108 (6.5) |
| 4 | 2002 | 1 (2.2) | 7 (3.1) | 94 (7.9) | 4 (15.4) | 9 (5.5) | 1 (11.1) | 116 (7.0) |
| 5 | 2003 | 2 (4.3) | 3 (1.3) | 34 (2.9) | 0 (0.0) | 3 (1.8) | 0 (0.0) | 42 (2.5) |
| 6 | 2004 | 2 (4.3) | 3 (1.3) | 26 (2.2) | 1 (3.8) | 1 (0.6) | 0 (0.0) | 33 (2.0) |
| 7 | 2005 | 4 (8.7) | 0 (0.0) | 29 (2.4) | 1 (3.8) | 1 (0.6) | 0 (0.0) | 35 (2.1) |
| 8 | 2006 | 2 (4.3) | 6 (2.7) | 51 (4.3) | 1 (3.8) | 2 (1.2) | 0 (0.0) | 62 (3.8) |
| 9 | 2007 | 3 (6.5) | 7 (3.1) | 58 (4.9) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 69 (4.2) |
| 10 | 2008 | 6 (13.0) | 10 (4.5) | 61 (5.1) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 78 (4.7) |
| 11 | 2009 | 3 (6.5) | 13 (5.8) | 33 (2.8) | 0 (0.0) | 3 (1.8) | 0 (0.0) | 52 (3.2) |
| 12 | 2010 | 4 (8.7) | 5 (2.2) | 56 (4.7) | 1 (3.8) | 0 (0.0) | 0 (0.0) | 66 (4.0) |
| 13 | 2011 | 12 (26.1) | 4 (1.8) | 109 (9.2) | 1 (3.8) | 0 (0.0) | 0 (0.0) | 126 (7.6) |
| 14 | 2012 | 3 (6.5) | 5 (2.2) | 48 (4.0) | 0 (0.0) | 2 (1.2) | 1 (11.1) | 59 (3.6) |
| 15 | 2013 | 3 (6.5) | 8 (3.6) | 33 (2.8) | 0 (0.0) | 2 (1.2) | 0 (0.0) | 46 (2.8) |
| 16 | 2014 | 0 (0.0) | 11 (4.9) | 37 (3.1) | 0 (0.0) | 2 (1.2) | 0 (0.0) | 50 (3.0) |
| 17 | 2015 | 0 (0.0) | 10 (4.5) | 28 (2.4) | 1 (3.8) | 1 (0.6) | 0 (0.0) | 40 (2.4) |
| 18 | 2016 | 0 (0.0) | 13 (5.8) | 74 (6.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 87 (5.3) |
| 19 | 2017 | 0 (0.0) | 9 (4.0) | 54 (4.5) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 64 (3.9) |
| 20 | 2018 | 0 (0.0) | 7 (3.1) | 40 (3.4) | 0 (0.0) | 5 (3.0) | 0 (0.0) | 52 (3.2) |
| 21 | 2019 | 0 (0.0) | 16 (7.2) | 18 (1.5) | 2 (7.7) | 4 (2.4) | 0 (0.0) | 40 (2.4) |
| 22 | 2020 | 0 (0.0) | 8 (3.6) | 17 (1.4) | 2 (7.7) | 3 (1.8) | 0 (0.0) | 30 (1.8) |
| 23 | 2021 | 0 (0.0) | 8 (3.6) | 13 (1.1) | 0 (0.0) | 13 (7.9) | 2 (22.2) | 36 (2.2) |
| 24 | 2022 | 0 (0.0) | 9 (4.0) | 48 (4.0) | 0 (0.0) | 48 (29.3) | 1 (11.1) | 97 (5.9) |
| 25 | 2023 | 0 (0.0) | 7 (3.1) | 20 (1.7) | 0 (0.0) | 20 (12.2) | 1 (11.1) | 48 (2.9) |
| Total | | 46 (2.8) | 223 (13.5) | 1191 (72.2) | 26 (1.6) | 164 (9.9) | 9 (0.5) | 1650 (100.0) |

Note: Values in parenthesis are in percentages.

Table 3. State-wise distribution of the establishments registered with CCSEA

| No. | States and Union Territories | Organization Nature | | | Type of Animals | | | Breeding purpose | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Government | Private | Total | Small | Large | Total | In house | Trade | Total |
| 1. | Andaman and Nicobar | 2 (0.5) | 0 (0.0) | 2 (0.1) | 2 (0.1) | 1 (0.7) | 3 (0.2) | 1 (0.2) | 0 (0.0) | 1 (0.2) |
| 2. | Andhra Pradesh | 9 (1.7) | 73 (6.6) | 82 (5.2) | 78 (5.0) | 0 (0.0) | 78 (4.6) | 4 (0.9) | 0 (0.0) | 4 (0.8) |
| 3. | Arunachal Pradesh | 1 (0.2) | 1 (0.0) | 2 (0.1) | 1 (0.1) | 1 (0.7) | 2 (0.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 4. | Assam | 11 (2.7) | 4 (0.4) | 15 (1.0) | 15 (1.0) | 1 (0.7) | 16 (0.9) | 6 (1.4) | 1 (0.9) | 7 (1.4) |
| 5. | Bihar | 6 (1.2) | 7 (0.6) | 13 (0.7) | 14 (0.9) | 3 (2.1) | 17 (1.0) | 3 (0.7) | 0 (0.0) | 3 (0.6) |
| 6. | Chandigarh | 3 (0.7) | 1 (0.0) | 4 (0.2) | 4 (0.3) | 0 (0.0) | 4 (0.2) | 3 (0.7) | 2 (1.8) | 5 (1.0) |
| 7. | Chhattisgarh | 6 (1.5) | 5 (0.4) | 11 (0.7) | 1 (0.1) | 0 (0.0) | 1 (0.1) | 2 (0.5) | 0 (0.0) | 2 (0.4) |
| 8. | Dadra and Nagar Haveli | 0 (0.0) | 1 (0.1) | 1 (0.1) | 1 (0.1) | 0 (0.0) | 1 (0.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 9. | Delhi | 22 (5.3) | 5 (0.5) | 27 (1.8) | 26 (1.7) | 2 (1.4) | 28 (1.6) | 20 (4.7) | 3 (2.7) | 23 (4.7) |
| 10. | Goa | 6 (1.0) | 3 (0.2) | 9 (0.4) | 10 (0.6) | 3 (2.1) | 13 (0.8) | 4 (0.9) | 0 (0.0) | 4 (0.8) |
| 11. | Gujarat | 19 (4.6) | 92 (8.0) | 111 (7.0) | 107 (6.9) | 10 (6.9) | 117 (6.9) | 36 (8.5) | 4 (3.6) | 40 (8.2) |
| 12. | Haryana | 15 (3.4) | 32 (2.7) | 47 (2.9) | 44 (2.8) | 10 (6.9) | 54 (3.2) | 12 (2.8) | 3 (2.7) | 15 (3.1) |
| 13. | Himachal Pradesh | 8 (1.5) | 17 (1.2) | 25 (1.3) | 24 (1.5) | 3 (2.1) | 27 (1.6) | 4 (0.9) | 1 (0.9) | 5 (1.0) |
| 14. | Jammu and Kashmir | 9 (2.2) | 0 (0.0) | 9 (0.6) | 9 (0.6) | 2 (1.4) | 11 (0.6) | 4 (0.9) | 1 (0.9) | 5 (1.0) |
| 15. | Jharkhand | 2 (0.5) | 1 (0.1) | 3 (0.2) | 3 (0.2) | 1 (0.7) | 4 (0.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 16. | Karnataka | 35 (8.5) | 127 (11.4) | 162 (10.6) | 161 (10.3) | 10 (6.9) | 171 (10.0) | 66 (15.6) | 18 (16.2) | 74 (15.3) |
| 17. | Kerala | 22 (5.1) | 39 (3.7) | 61 (4.1) | 61 (3.9) | 4 (2.8) | 65 (3.8) | 13 (3.1) | 5 (4.5) | 15 (3.1) |
| 18. | Madhya Pradesh | 16 (3.6) | 63 (6.0) | 79 (5.3) | 88 (5.6) | 1 (0.7) | 89 (5.2) | 12 (2.8) | 1 (0.9) | 13 (2.7) |
| 19. | Maharashtra | 42 (10.2) | 195 (17.3) | 237 (15.3) | 237 (15.2) | 21 (14.5) | 258 (15.1) | 76 (18.0) | 21 (18.9) | 60 (12.4) |
| 20. | Meghalaya | 2 (0.5) | 0 (0.0) | 2 (0.1) | 1 (0.1) | 1 (0.7) | 2 (0.1) | 2 (0.5) | 0 (0.0) | 2 (0.4) |
| 21. | Mizoram | 3 (0.7) | 0 (0.0) | 3 (0.2) | 3 (0.2) | 1 (0.7) | 4 (0.2) | 1 (0.2) | 0 (0.0) | 1 (0.2) |
| 22. | Nagaland | 1 (0.2) | 0 (0.0) | 1 (0.1) | 0 (0.0) | 1 (0.7) | 1 (0.1) | 1 (0.2) | 0 (0.0) | 1 (0.2) |
| 23. | Odisha | 16 (3.1) | 23 (1.8) | 39 (2.2) | 39 (2.5) | 1 (0.7) | 40 (2.3) | 4 (0.9) | 0 (0.0) | 4 (0.8) |
| 24. | Pondicherry | 6 (1.5) | 11 (0.8) | 17 (1.0) | 17 (1.1) | 1 (0.7) | 18 (1.1) | 4 (0.9) | 3 (2.7) | 7 (1.4) |
| 25. | Punjab | 10 (1.7) | 28 (2.6) | 38 (2.3) | 38 (2.4) | 1 (0.7) | 39 (2.3) | 10 (2.4) | 3 (2.7) | 13 (2.7) |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 26. | Rajasthan | 19 (2.9) | 34 (3.1) | 53 (3.1) | 52 (3.3) | 8 (5.5) | 60 (3.5) | 8 (1.9) | 1 (0.9) | 9 (1.9) |
| 27. | Sikkim | 1 (0.2) | 2 (0.2) | 3 (0.2) | 3 (0.2) | 0 (0.0) | 3 (0.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 28. | Tamil Nadu | 44 (10.2) | 108 (9.6) | 152 (9.7) | 152 (9.7) | 19 (13.1) | 171 (10.0) | 39 (9.2) | 9 (8.1) | 40 (8.2) |
| 29. | Telangana | 25 (4.8) | 130 (11.6) | 155 (9.7) | 150 (9.6) | 18 (12.4) | 168 (9.8) | 41 (9.7) | 22 (19.8) | 50 (10.3) |
| 30. | Tripura | 3 (0.5) | 1 (0.1) | 4 (0.2) | 4 (0.3) | 0 (0.0) | 4 (0.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 31. | Uttar Pradesh | 37 (8.7) | 86 (7.8) | 124 (8.0) | 124 (7.9) | 14 (9.7) | 128 (7.5) | 24 (5.7) | 4 (3.6) | 28 (5.8) |
| 32. | Uttarakhand | 9 (2.2) | 13 (0.9) | 21 (1.3) | 21 (1.3) | 3 (2.1) | 24 (1.4) | 7 (1.7) | 2 (1.8) | 9 (1.9) |
| 33. | West Bengal | 41 (8.5) | 30 (2.6) | 71 (4.2) | 71 (4.5) | 4 (2.8) | 75 (4.4) | 15 (3.6) | 7 (6.3) | 22 (4.5) |
| | Total | 451 (28.1) | 1132 (71.9) | 1583 (100.0) | 1561 (91.5) | 145 (8.5) | 1706 (100.0) | 422 (87.0) | 111 (22.9) | 485 (100.0) |

Note: Values in parenthesis are in percentages.

Table 4. State-wise distribution of the establishments based on purpose of registration with CCSEA

| No. | States and Union Territories | Purpose of CCSEA registration | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Academic | Contract | Education | Education and contract | Research | Research and contract | Total |
| 1. | Andaman and Nicobar | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2 (1.2) | 0 (0.0) | 2 (0.1) |
| 2. | Andhra Pradesh | 0 (0.0) | 6 (2.7) | 76 (6.4) | 0 (0.0) | 4 (2.4) | 0 (0.0) | 86 (5.2) |
| 3. | Arunachal Pradesh | 0 (0.0) | 0 (0.0) | 1 (0.1) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 2 (0.1) |
| 4. | Assam | 1 (2.2) | 0 (0.0) | 11 (0.9) | 0 (0.0) | 3 (1.8) | 0 (0.0) | 15 (0.9) |
| 5. | Bihar | 0 (0.0) | 0 (0.0) | 12 (1.0) | 0 (0.0) | 5 (3.0) | 0 (0.0) | 17 (1.0) |
| 6. | Chandigarh | 0 (0.0) | 1 (0.4) | 1 (0.1) | 1 (3.8) | 1 (0.6) | 0 (0.0) | 4 (0.2) |
| 7. | Chhattisgarh | 0 (0.0) | 0 (0.0) | 11 (0.9) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 12 (0.7) |
| 8. | Dadra and Nagar Haveli | 0 (0.0) | 0 (0.0) | 1 (0.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (0.1) |
| 9. | Delhi | 0 (0.0) | 3 (1.3) | 18 (1.5) | 1 (3.8) | 5 (3.0) | 0 (0.0) | 27 (1.6) |
| 10. | Goa | 0 (0.0) | 1 (0.4) | 7 (0.6) | 0 (0.0) | 4 (2.4) | 0 (0.0) | 12 (0.7) |
| 11. | Gujarat | 1 (2.2) | 24 (10.8) | 78 (6.5) | 2 (7.7) | 4 (2.4) | 0 (0.0) | 109 (6.6) |
| 12. | Haryana | 0 (0.0) | 8 (3.6) | 34 (2.9) | 0 (0.0) | 6 (3.7) | 0 (0.0) | 48 (2.9) |
| 13. | Himachal Pradesh | 2 (4.3) | 3 (1.3) | 19 (1.6) | 1 (3.8) | 5 (3.0) | 0 (0.0) | 30 (1.8) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14. | Jammu and Kashmir | 0 (0.0) | 0 (0.0) | 5 (0.4) | 1 (3.8) | 3 (1.8) | 0 (0.0) | 9 (0.5) |
| 15. | Jharkhand | 0 (0.0) | 0 (0.0) | 3 (0.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (0.2) |
| 16. | Karnataka | 6 (13.0) | 34 (15.2) | 117 (9.8) | 3 (11.5) | 5 (3.0) | 1 (11.1) | 160 (9.7) |
| 17. | Kerala | 1 (2.2) | 7 (3.1) | 44 (3.7) | 1 (3.8) | 8 (4.9) | 0 (0.0) | 61 (3.7) |
| 18. | Madhya Pradesh | 6 (13.0) | 4 (1.8) | 72 (6.0) | 0 (0.0) | 10 (6.1) | 0 (0.0) | 92 (5.6) |
| 19. | Maharashtra | 5 (10.9) | 44 (19.7) | 176 (14.8) | 3 (11.5) | 10 (6.1) | 2 (22.2) | 232 (14.1) |
| 20. | Meghalaya | 0 (0.0) | 0 (0.0) | 1 (0.1) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 2 (0.1) |
| 21. | Mizoram | 0 (0.0) | 0 (0.0) | 3 (0.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (0.2) |
| 22. | Nagaland | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 1 (0.1) |
| 23. | Odisha | 1 (2.2) | 2 (0.9) | 32 (2.7) | 0 (0.0) | 10 (6.1) | 1 (11.1) | 46 (2.8) |
| 24. | Pondicherry | 1 (2.2) | 3 (1.3) | 13 (1.1) | 0 (0.0) | 2 (1.2) | 0 (0.0) | 19 (1.2) |
| 25. | Punjab | 0 (0.0) | 1 (0.4) | 32 (2.7) | 2 (7.7) | 5 (3.0) | 0 (0.0) | 40 (2.4) |
| 26. | Rajasthan | 5 (10.9) | 1 (0.4) | 42 (3.5) | 0 (0.0) | 9 (5.5) | 1 (11.1) | 58 (3.5) |
| 27. | Sikkim | 0 (0.0) | 0 (0.0) | 3 (0.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (0.2) |
| 28. | Tamil Nadu | 10 (21.7) | 21 (9.4) | 105 (8.8) | 7 (26.9) | 13 (7.9) | 2 (22.2) | 158 (9.6) |
| 29. | Telangana | 0 (0.0) | 51 (22.9) | 105 (8.8) | 0 (0.0) | 18 (11.0) | 0 (0.0) | 174 (10.5) |
| 30. | Tripura | 1 (2.2) | 0 (0.0) | 3 (0.3) | 0 (0.0) | 0 (0.0) | 1 (11.1) | 5 (0.3) |
| 31. | Uttar Pradesh | 1 (2.2) | 7 (3.1) | 98 (8.2) | 3 (11.5) | 14 (8.5) | 0 (0.0) | 123 (7.5) |
| 32. | Uttarakhand | 2 (4.3) | 1 (0.4) | 16 (1.3) | 0 (0.0) | 4 (2.4) | 1 (11.1) | 24 (1.5) |
| 33. | West Bengal | 2 (4.3) | 9 (4.0) | 52 (4.4) | 1 (3.8) | 10 (6.1) | 0 (0.0) | 74 (4.5) |
| | Total | 46 (2.8) | 223 (13.5) | 1191 (72.2) | 26 (1.6) | 164 (9.9) | 9 (0.5) | 1650 (100.0) |

Note: Values in parenthesis are in percentages.

Table 5. State-wise distribution of the establishments certified by GLP

| No. | States and Union Territories | Organization Nature | | | Type of Animals | | | Breeding purpose | | | Purpose of CCSEA registration | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government | Private | Total | Small | Large | Total | Inhouse | Trade | Total | Contract | Education | Education and contract | Total |
| 1 | Andhra Pradesh | 0 (0.0) | 1 (2.1) | 1 (1.9) | 1 (2.7) | 0 (0.0) | 1 (1.9) | 1 (2.9) | 0 (0.0) | 1 (2.1) | 1 (2.1) | 0 (0.0) | 0 (0.0) | 1 (1.9) |
| 2 | Delhi | 0 (0.0) | 1 (2.1) | 1 (1.9) | 1 (2.7) | 0 (0.0) | 1 (1.9) | 1 (2.9) | 0 (0.0) | 1 (2.1) | 1 (2.1) | 0 (0.0) | 0 (0.0) | 1 (1.9) |
| 3 | Goa | 0 (0.0) | 1 (2.1) | 1 (1.9) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (2.1) | 0 (0.0) | 0 (0.0) | 1 (1.9) |
| 4 | Gujarat | 0 (0.0) | 8 (16.7) | 8 (15.4) | 6 (16.2) | 5 (29.4) | 11 (20.4) | 6 (17.6) | 1 (7.1) | 7 (14.6) | 8 (16.7) | 0 (0.0) | 0 (0.0) | 8 (15.4) |
| 5 | Haryana | 1 (25.0) | 2 (4.2) | 3 (5.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (6.3) | 0 (0.0) | 0 (0.0) | 3 (5.8) |
| 6 | Karnataka | 0 (0.0) | 7 (14.6) | 7 (13.5) | 7 (18.9) | 3 (17.6) | 10 (18.5) | 6 (17.6) | 2 (14.3) | 8 (16.7) | 7 (14.6) | 0 (0.0) | 0 (0.0) | 7 (13.5) |
| 7 | Maharashtra | 0 (0.0) | 11 (22.9) | 11 (21.2) | 6 (16.2) | 1 (5.9) | 7 (13.0) | 5 (14.7) | 2 (14.3) | 7 (14.6) | 10 (20.8) | 1 (50.0) | 0 (0.0) | 11 (21.2) |
| 8 | Puducherry | 0 (0.0) | 1 (2.1) | 1 (1.9) | 1 (2.7) | 0 (0.0) | 1 (1.9) | 1 (2.9) | 1 (7.1) | 2 (4.2) | 1 (2.1) | 0 (0.0) | 0 (0.0) | 1 (1.9) |
| 9 | Punjab | 1 (25.0) | 0 (0.0) | 1 (1.9) | 1 (2.7) | 0 (0.0) | 1 (1.9) | 1 (2.9) | 1 (7.1) | 2 (4.2) | 0 (0.0) | 0 (0.0) | 1 (50.0) | 1 (1.9) |
| 10 | Rajasthan | 0 (0.0) | 2 (4.2) | 2 (3.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2 (4.2) | 0 (0.0) | 0 (0.0) | 2 (3.8) |
| 11 | Tamil Nadu | 0 (0.0) | 5 (10.4) | 5 (9.6) | 4 (10.8) | 3 (17.6) | 7 (13.0) | 3 (8.8) | 1 (7.1) | 4 (8.3) | 5 (10.4) | 0 (0.0) | 0 (0.0) | 5 (9.6) |
| 12 | Telangana | 0 (0.0) | 7 (14.6) | 7 (13.5) | 6 (16.2) | 3 (17.6) | 9 (16.7) | 6 (17.6) | 4 (28.6) | 10 (20.8) | 7 (14.6) | 0 (0.0) | 0 (0.0) | 7 (13.5) |
| 13 | Uttar Pradesh | 2 (50.0) | 1 (2.1) | 3 (5.8) | 3 (5.8) | 1 (5.9) | 4 (7.4) | 3 (8.8) | 1 (7.1) | 4 (8.3) | 1 (2.1) | 1 (50.0) | 1 (50.0) | 3 (5.8) |
| 14 | West Bengal | 0 (0.0) | 1 (2.1) | 1 (1.9) | 1 (2.7) | 1 (5.9) | 2 (3.7) | 1 (2.9) | 1 (7.1) | 2 (4.2) | 1 (2.1) | 0 (0.0) | 0 (0.0) | 1 (1.9) |
| Total | | 4 (7.7) | 48 (92.3) | 52 (100) | 37 (68.5) | 17 (31.5) | 54 (100) | 34 (70.8) | 14 (29.2) | 48 (100) | 48 (92.3) | 2 (3.8) | 2 (3.8) | 52 (100) |

Note: Values in parenthesis are in percentages.

Table 6. State-wise distribution of the establishments accredited by AAALAC

| No. | States | Organization Nature | Type of Animals | | | Breeding purpose | | | Purpose of CCSEA registration | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Private | Small | Large | Total | Inhouse | Trade | Total | Contract | Education | Total |
| 1 | Gujarat | 4 (14.3) | 4 (14.8) | 4 (36.4) | 8 (21.1) | 4 (17.4) | 0 (0.0) | 4 (12.1) | 4 (14.8) | 0 (0.0) | 4 (14.3) |
| 2 | Karnataka | 7 (25.0) | 7 (25.9) | 2 (18.2) | 9 (23.7) | 6 (26.1) | 3 (30.0) | 9 (27.3) | 7 (25.9) | 0 (0.0) | 7 (25.0) |
| 3 | Maharashtra | 3 (10.7) | 3 (11.1) | 2 (18.2) | 5 (13.2) | 2 (8.7) | 0 (0.0) | 2 (6.1) | 2 (7.4) | 1 | 3 (10.7) |
| 4 | Tamil Nadu | 1 (3.6) | 1 (3.7) | 0 (0.0) | 1 (2.6) | 1 (4.3) | 1 (10.0) | 2 (6.1) | 1 (3.7) | 0 (0.0) | 1 (3.6) |
| 5 | Telangana | 10 (35.7) | 9 (33.3) | 2 (18.2) | 11 (28.9) | 7 (30.4) | 5 (50.0) | 12 (36.4) | 10 (37.0) | 0 (0.0) | 10 (35.7) |
| 6 | Uttar Pradesh | 1 (3.6) | 1 (3.7) | 0 (0.0) | 1 (2.6) | 1 (4.3) | 0 (0.0) | 1 (3.0) | 1 (3.7) | 0 (0.0) | 1 (3.6) |
| 7 | West Bengal | 2 (7.1) | 2 (7.4) | 1 (9.1) | 3 (7.9) | 2 (8.7) | 1 (10.0) | 3 (9.1) | 2 (7.4) | 0 (0.0) | 2 (7.1) |
| Total | | 28 (100.0) | 27 (71.1) | 11 (28.9) | 38 (100.0) | 23 (69.7) | 10 (30.3) | 33 (100.0) | 27 (96.4) | 1 (3.6) | 28 (100.0) |