

DISTRIBUTION OF HOUSE SPARROW *PASSER DOMESTICUS* IN TAMIL NADU AND PUDUCHERRY



eBird
India



MOTIVATION TO CREATE THE DISTRIBUTION MAPS

Did you know how many birds are there in the world? at least [50 billion wild birds](#) or 6 birds for every human on the planet! One may wonder how is it possible for a few Australian researchers to calculate such numbers but through a combination of citizen science and big data analytics, they have estimated this entire global population of birds.

In order to estimate the number of birds in the whole world, the researchers pooled the bird sightings from [eBird](#), an online database of bird observations curated by citizen scientists and run by the Cornell Lab of Ornithology. Over 6,00,000 people have contributed information to the database.

Inspired by the news above, [Salem Ornithological Foundation](#) decided to create detailed distribution maps for any one particular species for each of the 38 districts in Tamil Nadu and for Puducherry (UT) as well. We decided to map the distribution of one of the most familiar and a favourite species of many, the **House Sparrow** *Passer domesticus*. Similar to how researchers used eBird data to estimate the number of birds, we have also used the data from eBird to create the distribution maps.

UNDERSTANDING THE DISTRIBUTION MAPS

Using the eBird India data from the past ten years (June 2011 to May 2021), we have created the distribution maps (presence/absence) of **House Sparrow** *Passer domesticus* for each of the 38 districts in Tamil Nadu and for Puducherry. We drew grids on the districts to map their distribution. The size of each grid is 3.3 km x 3.3 km. So, the **total area of each grid is 10.89 square kilometers.**

The purple grids indicate the presence of House Sparrows recorded from those locations. The greyish grids mean that bird watchers have uploaded eBird checklists from those places but House Sparrows were not recorded. The blank grids indicate the absence of data. **Please note that these distribution maps don't reflect the population, abundance or density of House Sparrows** in our region.

MAKING OF THE REPORT

The data of all the species recorded in Tamil Nadu was downloaded from eBird India. From that, the data of House Sparrows were segregated using R. The Tamil Nadu political map with the recently split districts was downloaded from www.github.com. Using QGIS, grids were drawn on the map. The map was then put in R and the districts were separated. Using Leaflet, we created the interactive distribution map where **you can zoom in to see the presence or absence of House Sparrows along with the names of the locations.** The [interactive map](#) is best viewed from a computer or laptop.

WHY IS THE DISTRIBUTION (PRESENCE/ABSENCE) OF HOUSE SPARROWS MORE IN CERTAIN DISTRICTS AND LESS IN OTHERS?

Most of the bird watchers in Salem district (and especially those who are associated with SOF) upload checklists to eBird database every single day from different parts of the district. They also consistently participate in the regional, national and international bird counting events. All these help to build a large amount of data on various species found in Salem. We are proud to say that Salem birders continue to lead and make significant contributions to eBird in India in the recent years.

However, the number of bird watchers contributing to eBird from certain districts of Tamil Nadu is less compared to the districts with many bird watchers. So, the influx of data will also be less. The distribution maps were prepared based on the available data, so in such districts, the distribution of House Sparrows will also appear in lesser number of grids.

In places where there are no data, we encourage you to watch birds and upload checklists to eBird throughout the year or in all the seasons. Only through such contribution, it is possible to map the distribution of birds with great accuracy. We strongly recommend and encourage you to contribute to citizen science initiatives like [eBird](#), to help in the conservation of birds and nature in the long run.

IS RADIATION FROM MOBILE TOWERS A REASON FOR DECLINE?

One of our relatives house in Krishnagiri is right below a mobile tower. Initially there were only a few pairs of House Sparrows living around but their population has increased over the years and we have seen several nests inside the home too. The very same mobile tower is also a roosting place to a large flock of Great Cormorants *Phalacrocorax carbo*. We've also seen waterbirds like the Spot-billed Pelican *Pelecanus philippensis* nest on mobile towers and observed Indian Peafowls *Pavo cristatus* and Red-naped Ibises *Pesudibis papillosa* roosting on mobile towers in some of the districts in southern Tamil Nadu.

The popular misconception that radiation from mobile towers is a factor for decline in numbers is yet to be proven with scientific evidence. To know more about Sparrows, please read a few important articles written by Dr P Jeganathan in Tamil.

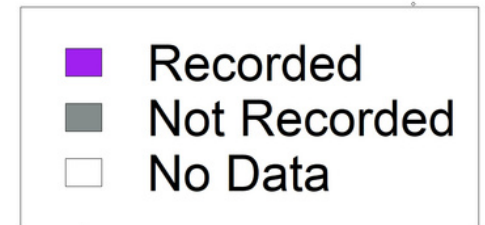
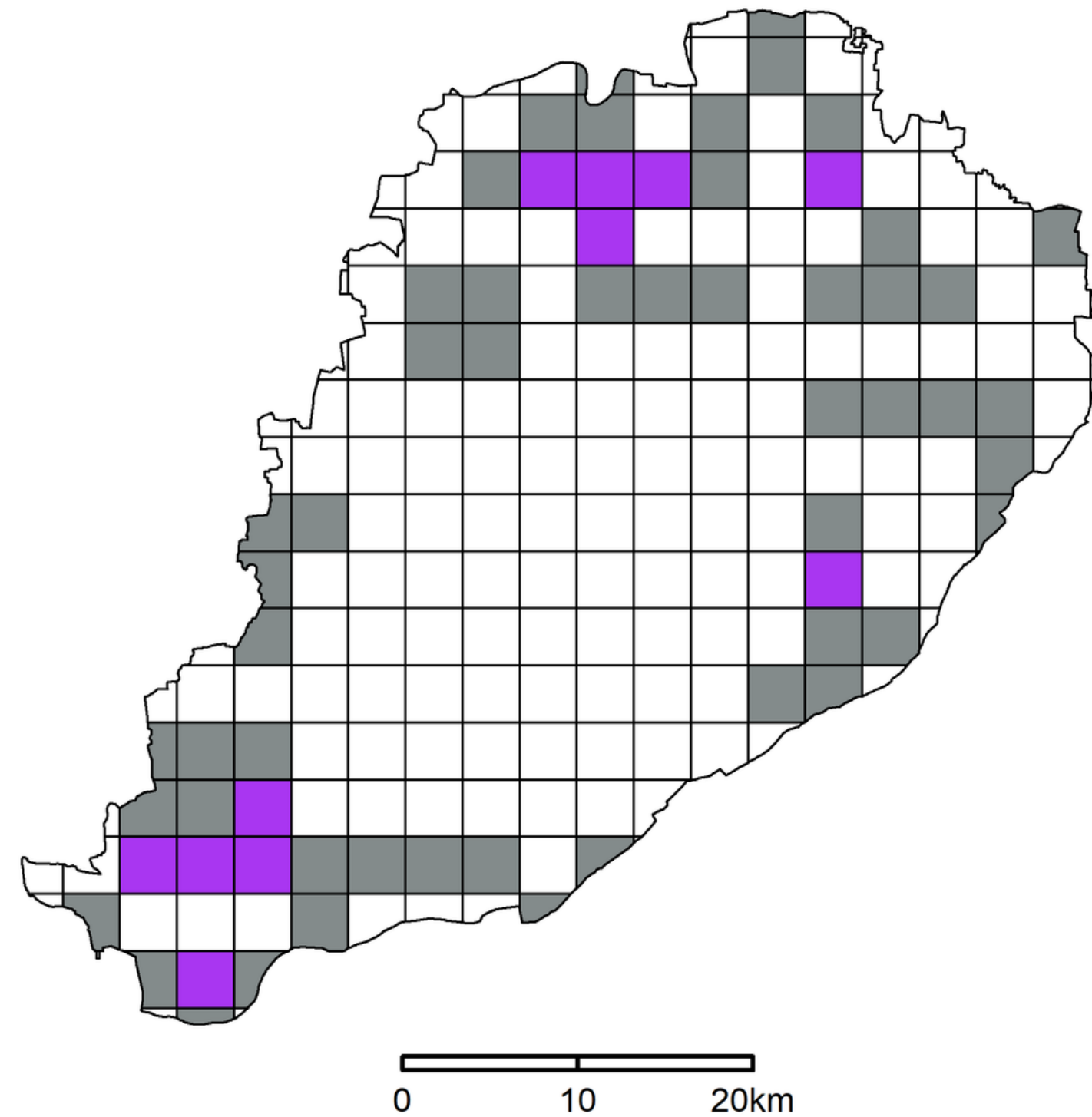
1. [சிட்டுக்குருவி உங்கள் வீட்டுக்கு வருகிறதா?](#) (Do Sparrows visit your home?)
2. [சிட்டுக்குருவியின் வீழ்ச்சியும், நாம் பெற்ற படிப்பினையும்](#) (Our learning from the decline of the Sparrow)
3. [சிட்டுக்குருவிகள் உண்மையிலேயே அழிந்து வருகின்றனவா?](#) (Are Sparrows really declining?)
4. [பறவைகள்: மூடநம்பிக்கைகளும், அறிவியல் விளக்கங்களும்](#) (Scientific explanations to popular misconceptions on birds)
5. [“2.0 – படம் அறிவியலுக்கு எதிரான படம்”](#) – (2.0 - movie is against science, Ananda Vikatan interview)
6. [Sparrows, science and species conservation in India](#) by Dr K S Gopi Sundar.

GOOD NEWS! HOUSE SPARROWS ARE DOING WELL, BUT...

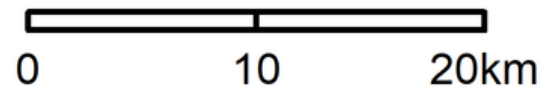
House Sparrows *Passer domesticus* have a widespread distribution across the world. Recent research tells us that it is the most abundant bird species in the world with a population of 1.6 billion birds! "Despite the widespread notion that the House Sparrow is declining in India, the analysis suggests that the species has been fairly stable overall during the past 25+ years. Data from the six largest metro cities (Bengaluru, Chennai, Delhi, Hyderabad, Kolkata and Mumbai) do indicate a gradual decline in their abundance in urban centres. However, the extremely large range of the species across the country, and the lack of evidence for either long-term or current countrywide decline results in it being classified as of Low Conservation Concern." - [State of India's Birds](#) report.

If the population of House Sparrows start to decrease across India, ornithologists will raise the alarm beforehand. So, please don't worry about the Sparrows now. Kindly give a share of the attention and conservation activities from Sparrows to other common birds and threatened birds that are actually declining. Only that would give real meaning to our overall interest and thought to the conservation of birds and nature. Currently, birds of prey, insectivores and waterbirds are rapidly declining due to various anthropogenic impacts. Let us explore, begin to understand why and how they are essential in our life, what are the problems that we'll be facing when these birds go extinct, the conservation measures taken and how we can contribute to such initiatives.

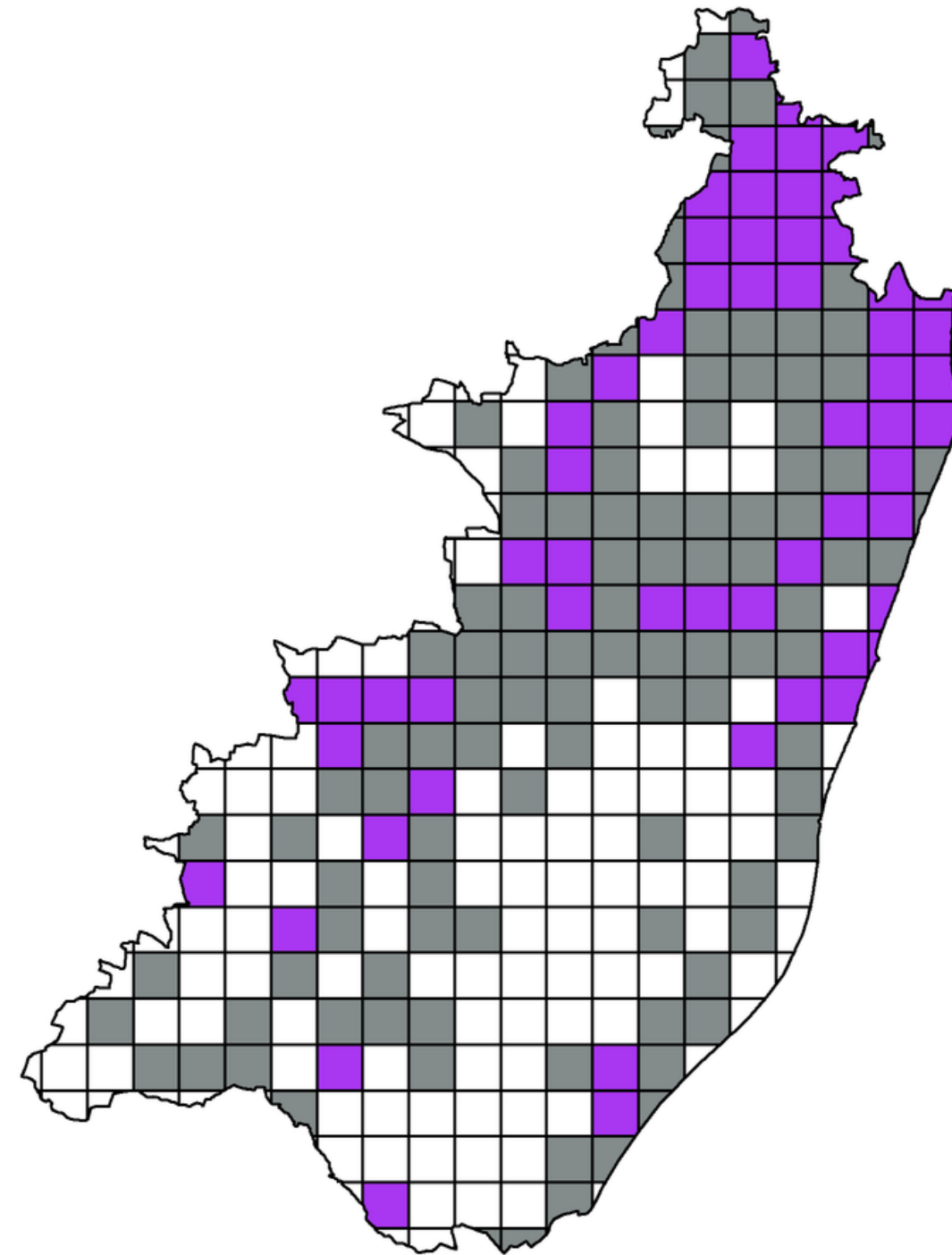
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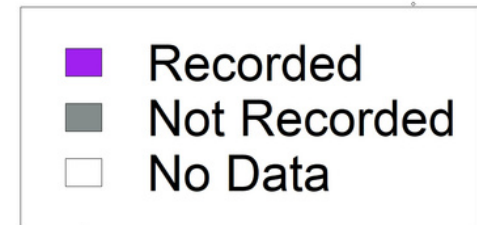
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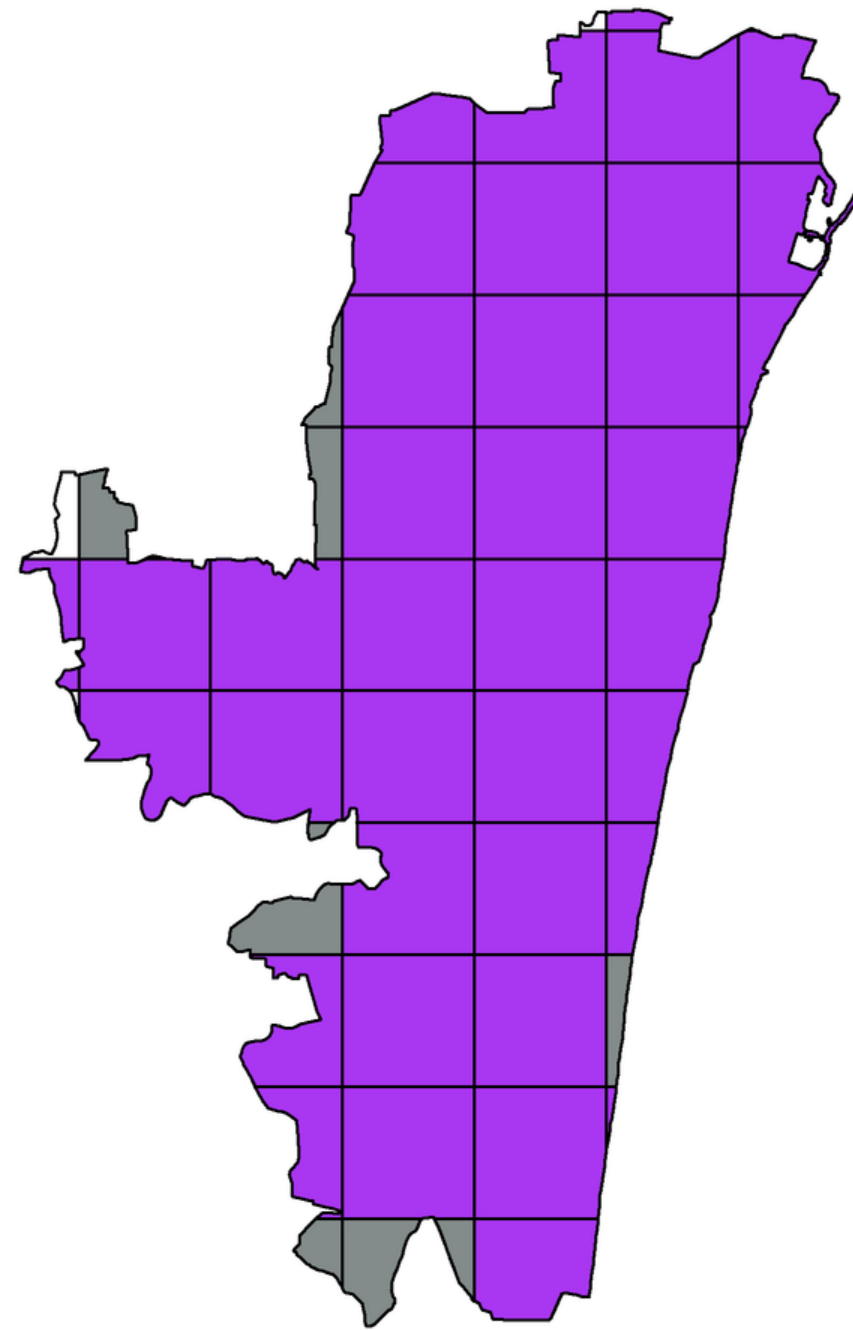
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Grid Size - 3.3 x 3.3 km



DISTRIBUTION OF HOUSE SPARROW IN CHENNAI DISTRICT



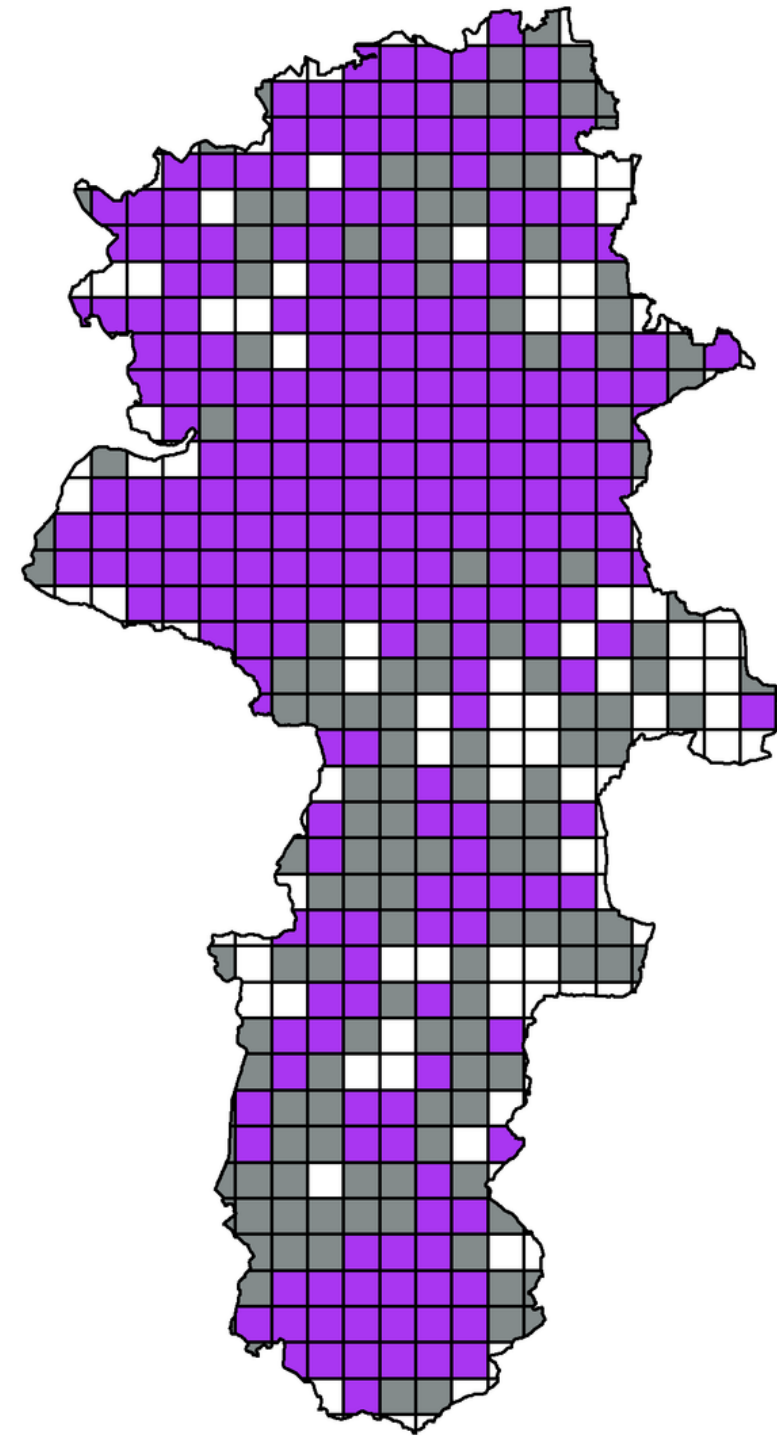
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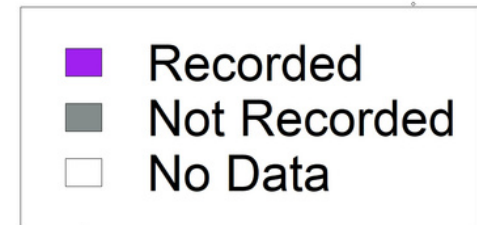
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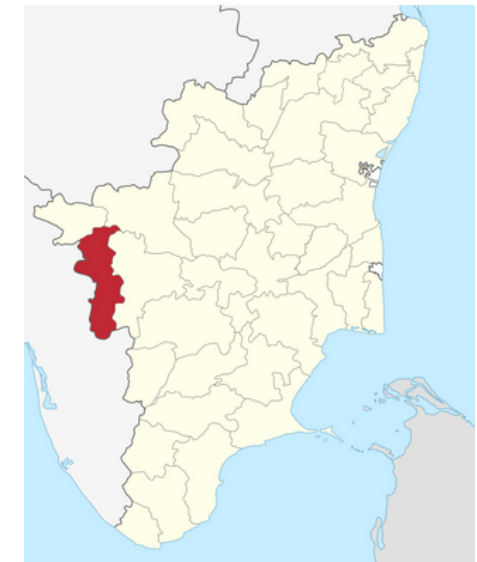
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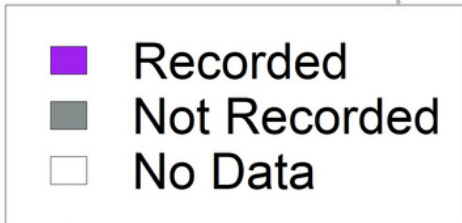
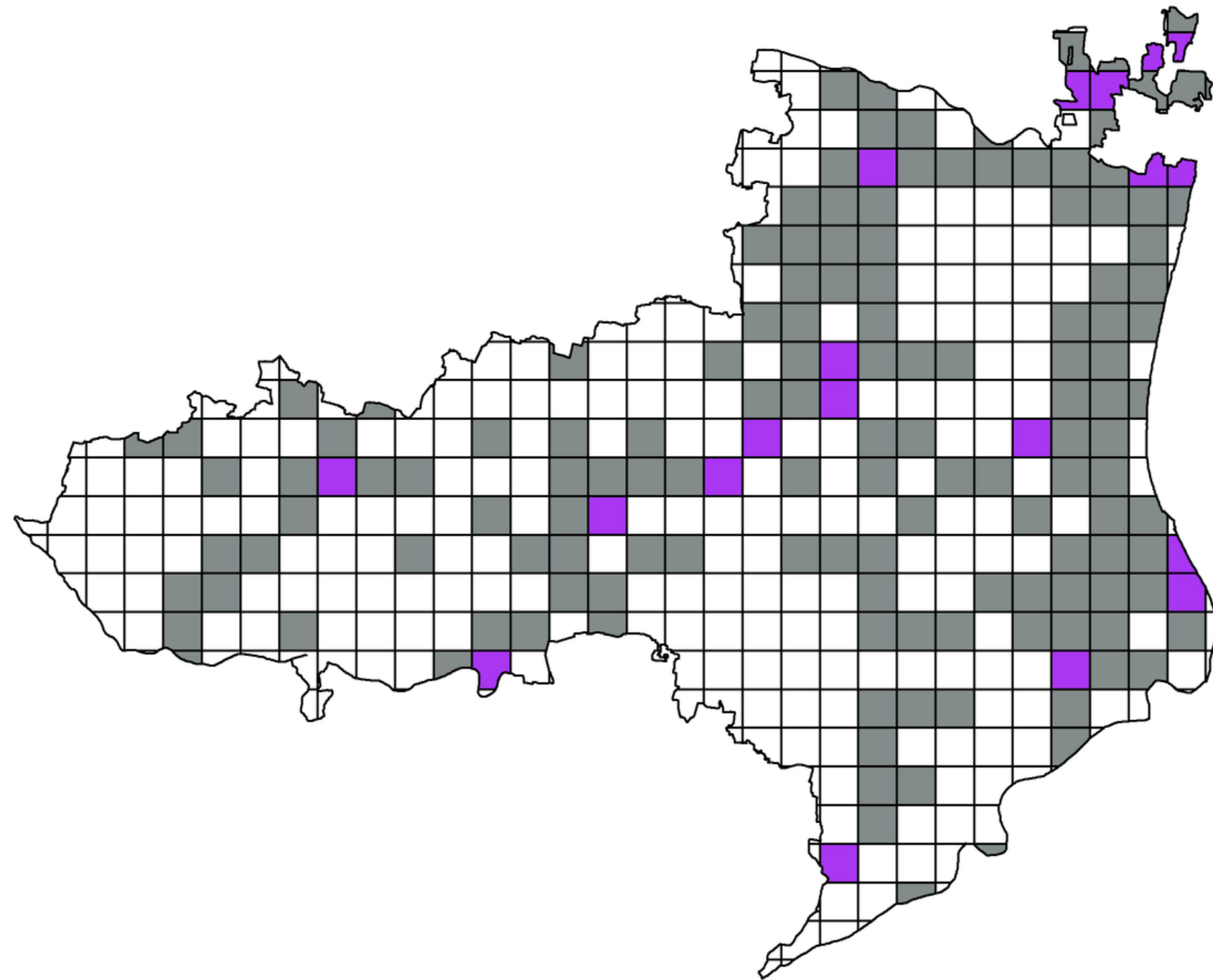
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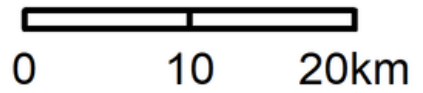
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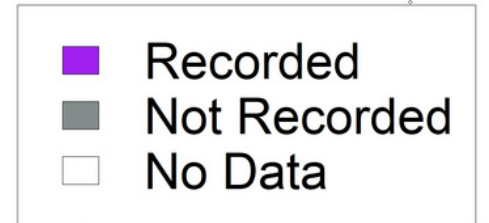
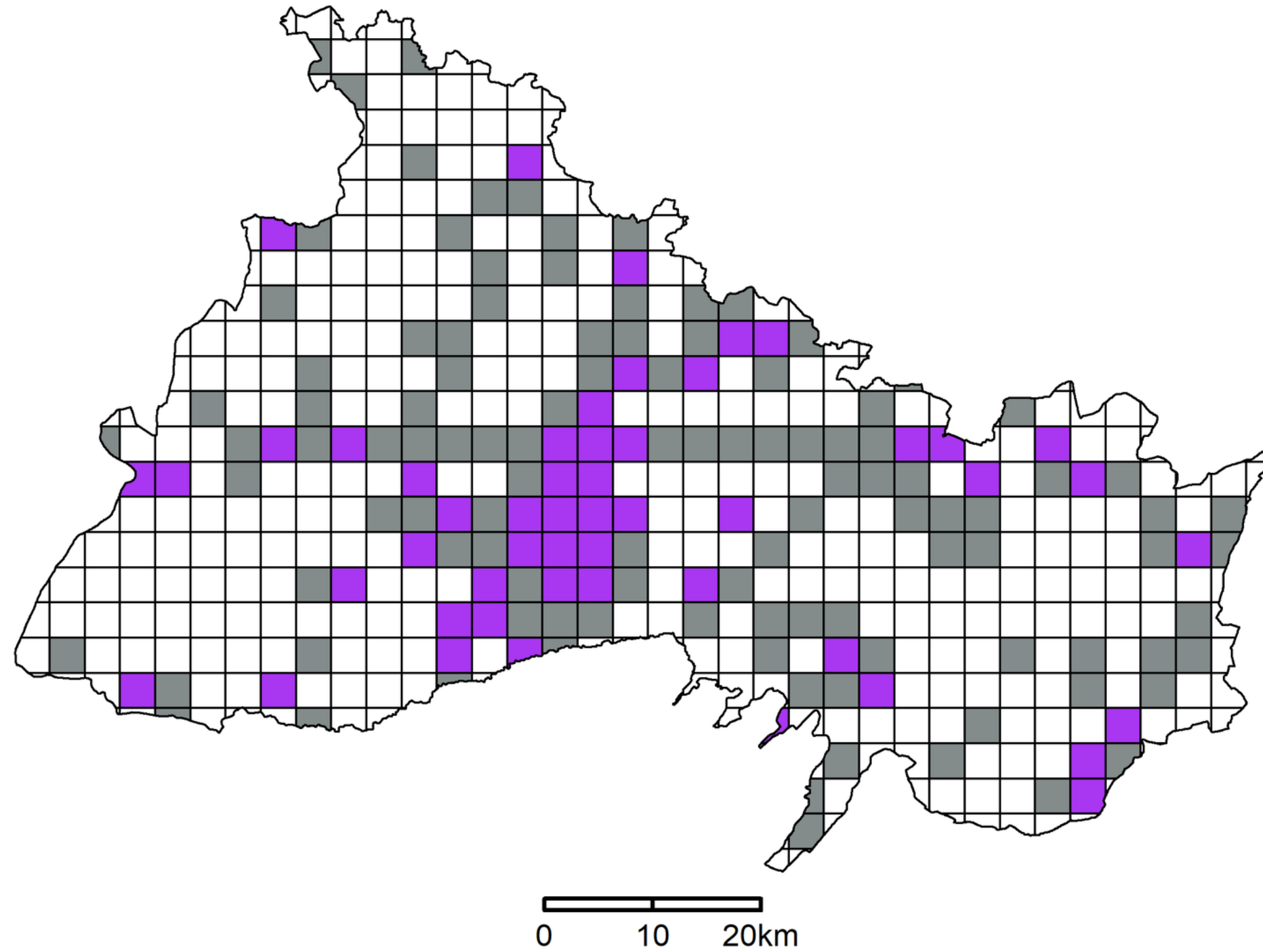
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Grid Size - 3.3 x 3.3 km



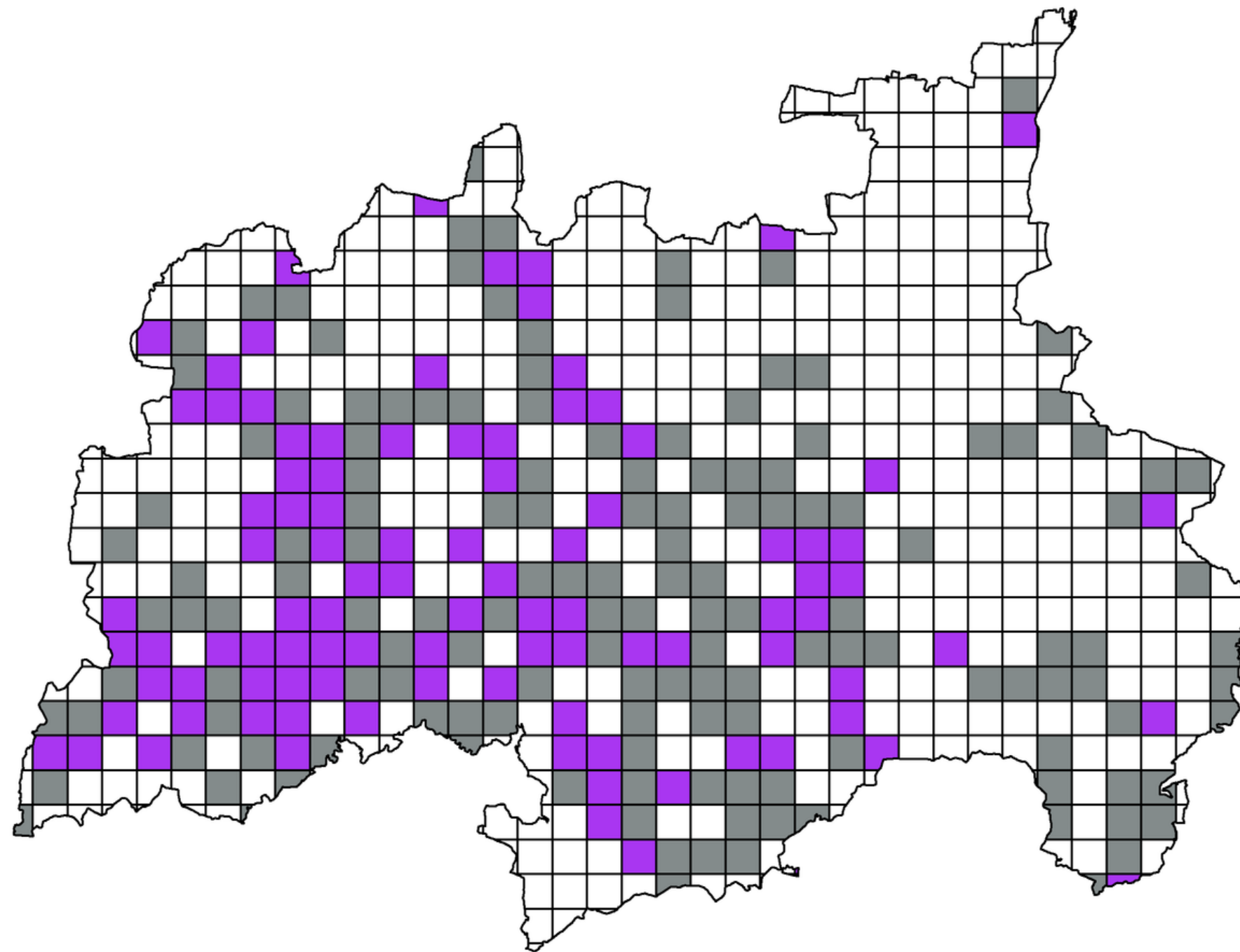
DISTRIBUTION OF HOUSE SPARROW IN DHARMAPURI DISTRICT



Grid Size - 3.3 x 3.3 km



DISTRIBUTION OF HOUSE SPARROW IN DINDIGUL DISTRICT



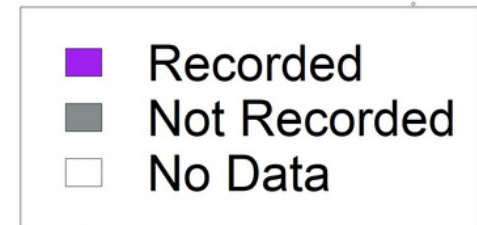
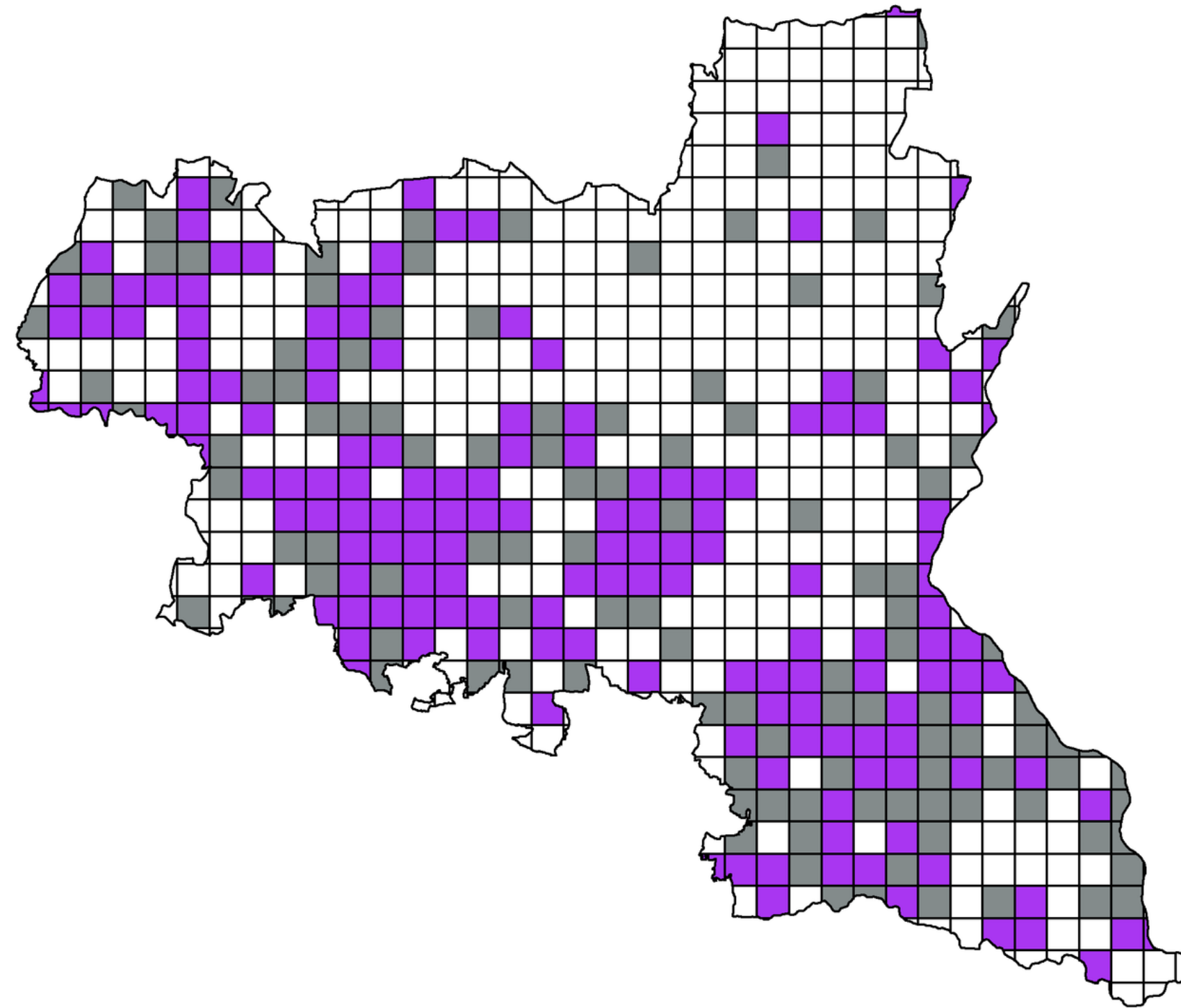
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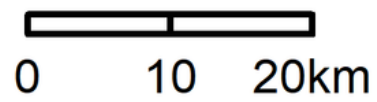
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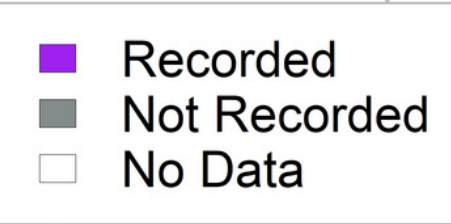
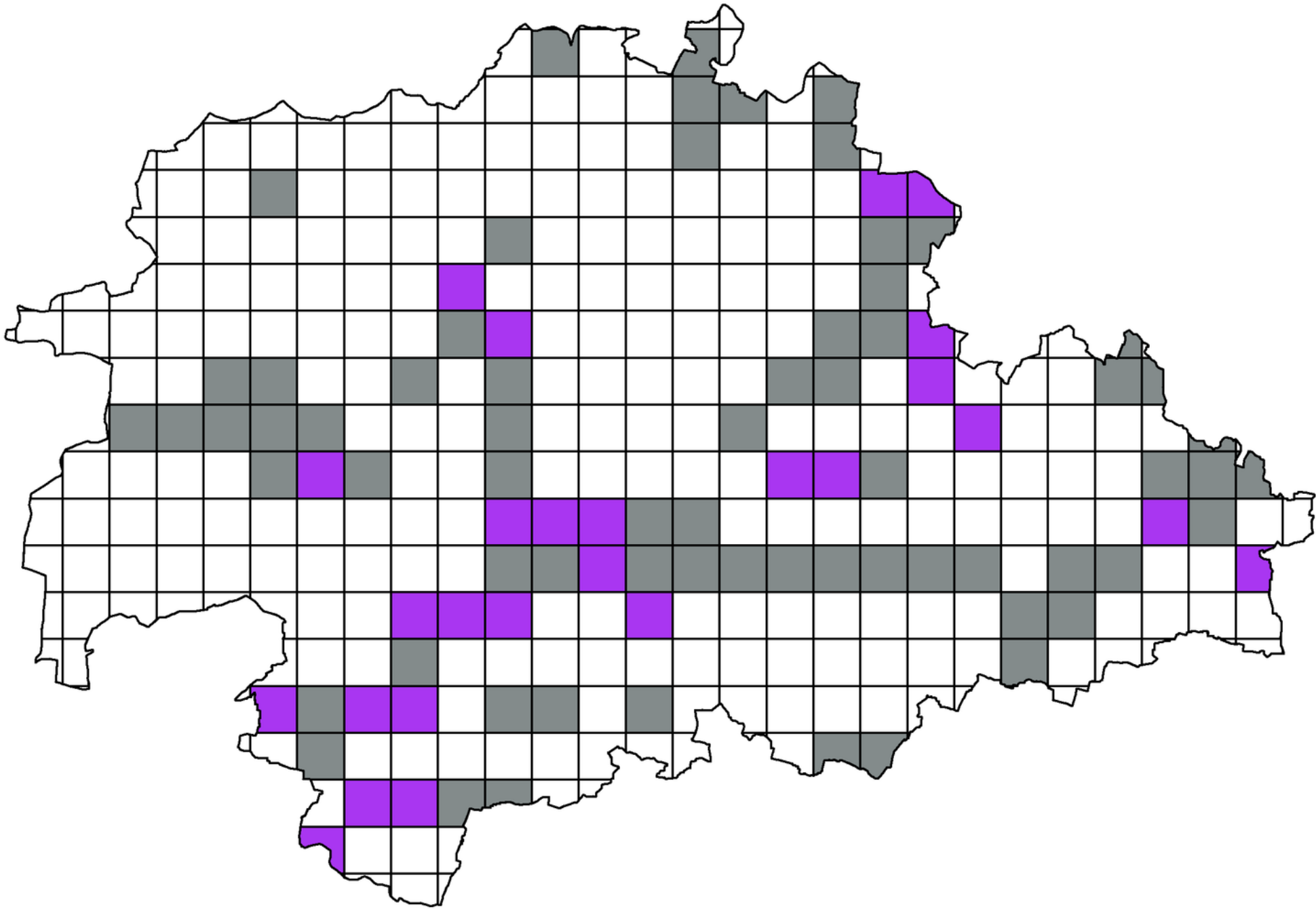
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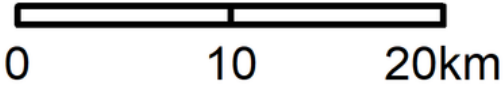
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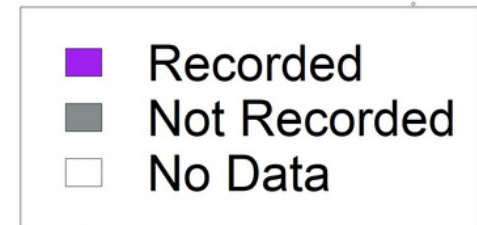
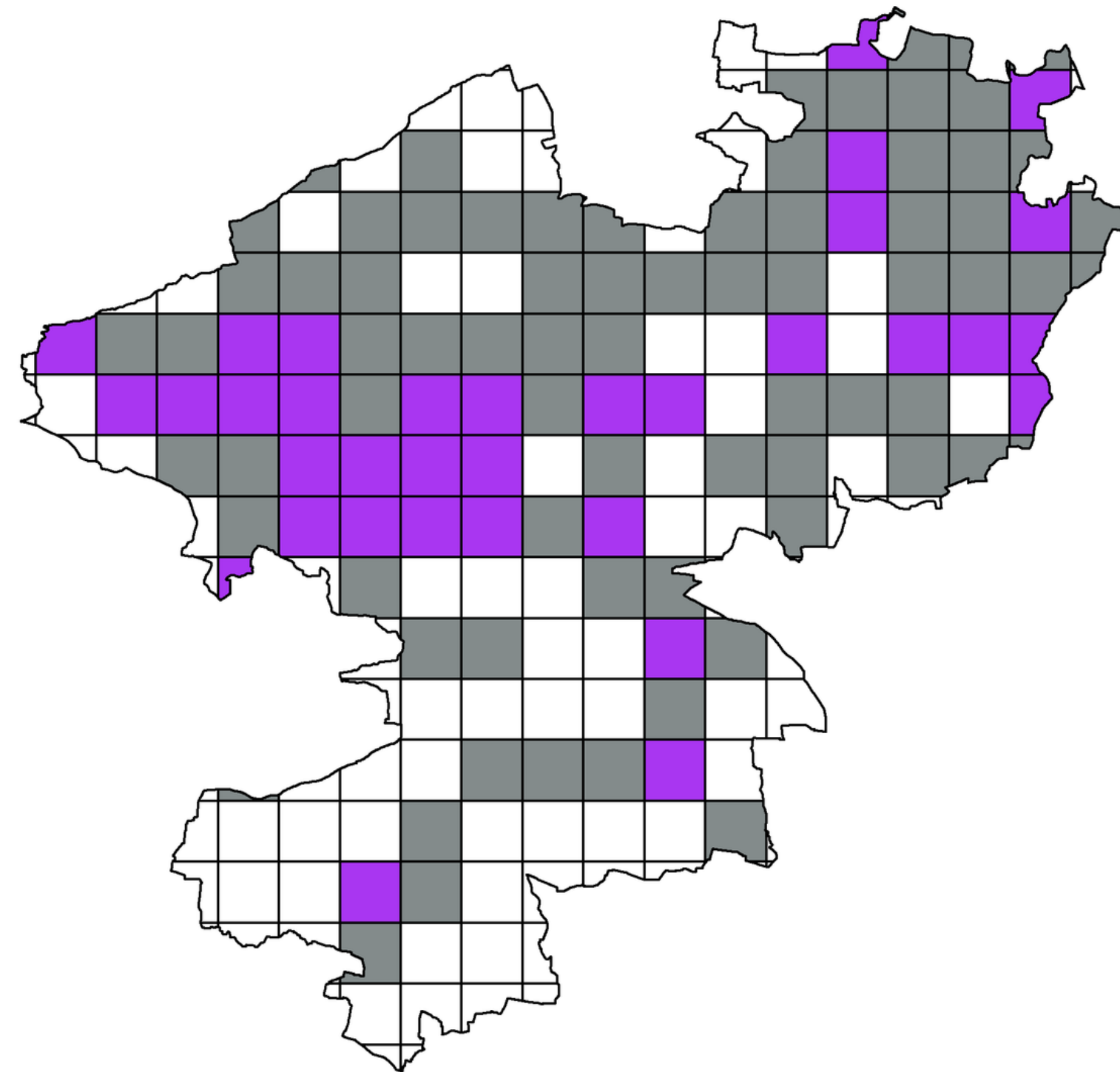
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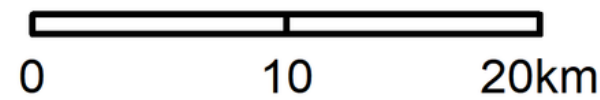
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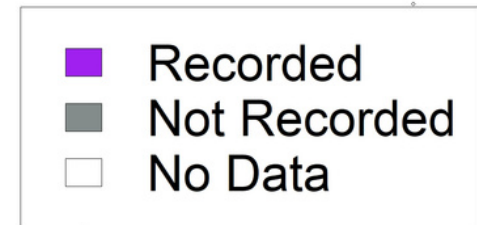
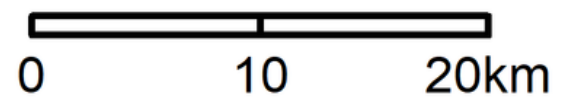
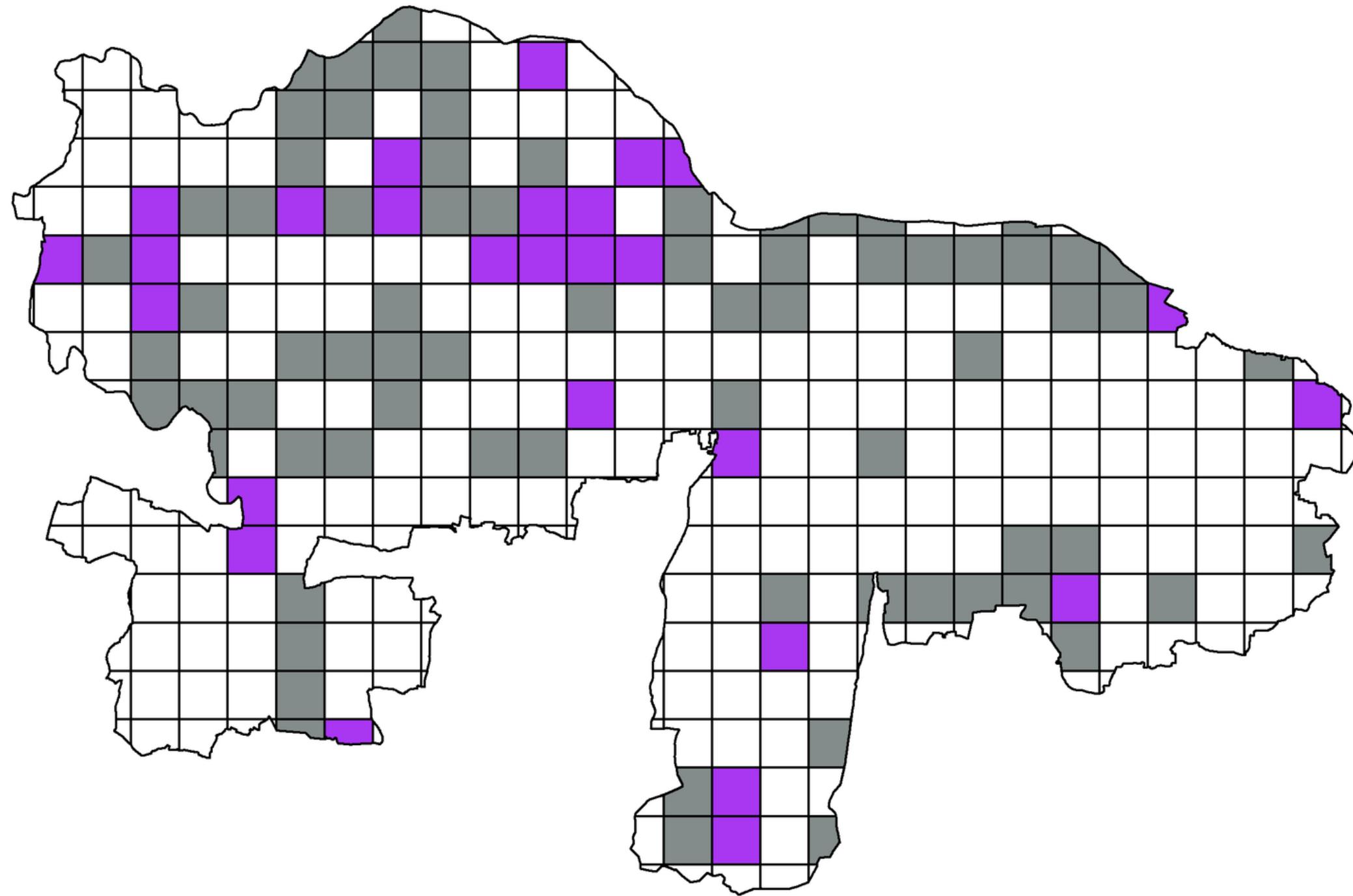
DISTRIBUTION OF HOUSE SPARROW IN KANCHEEPURAM DISTRICT



Grid Size - 3.3 x 3.3 km



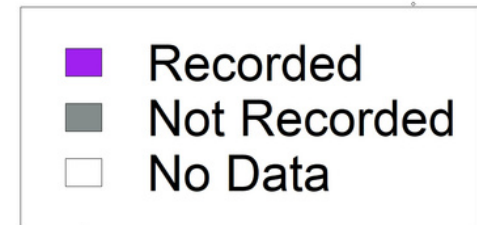
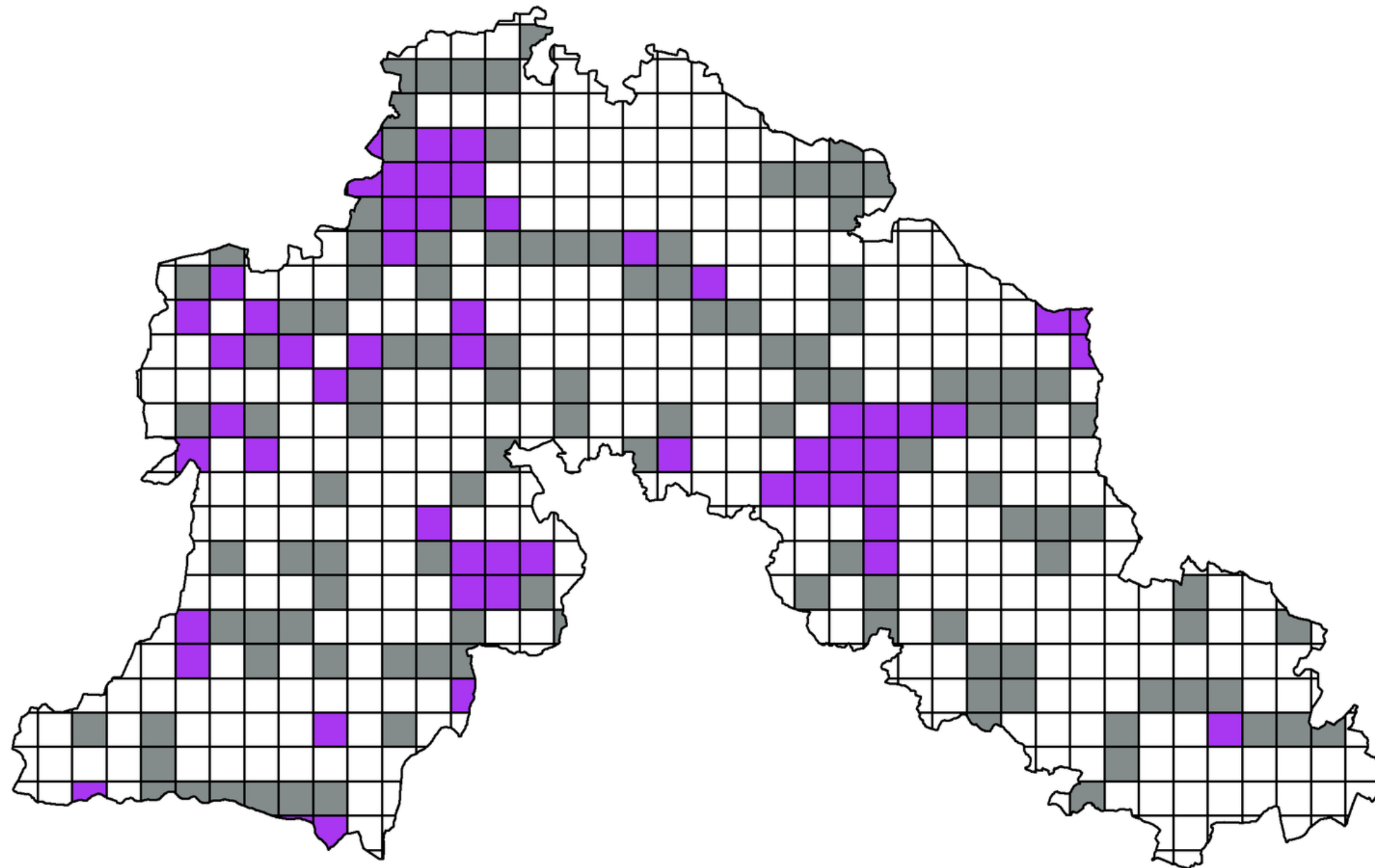
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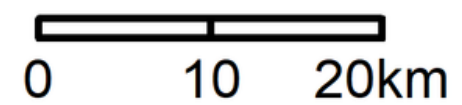
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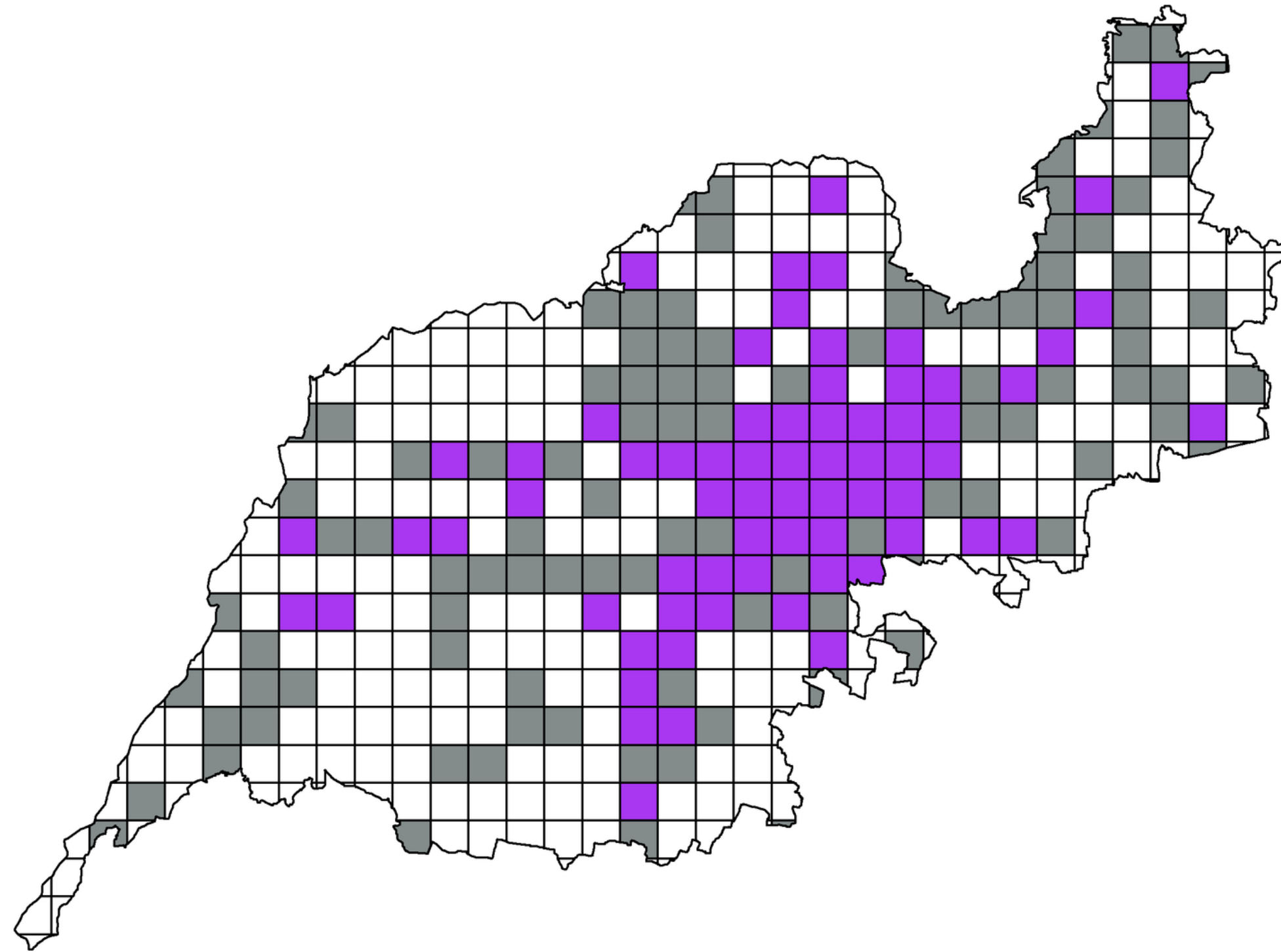
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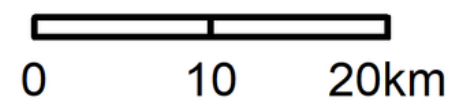
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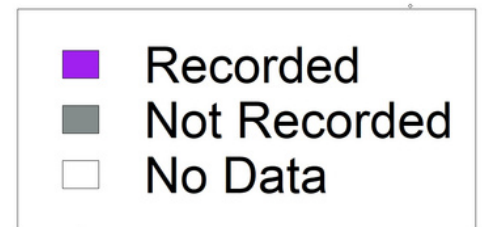
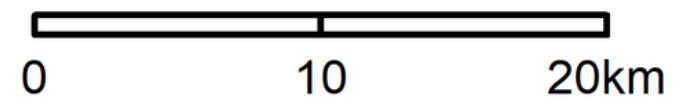
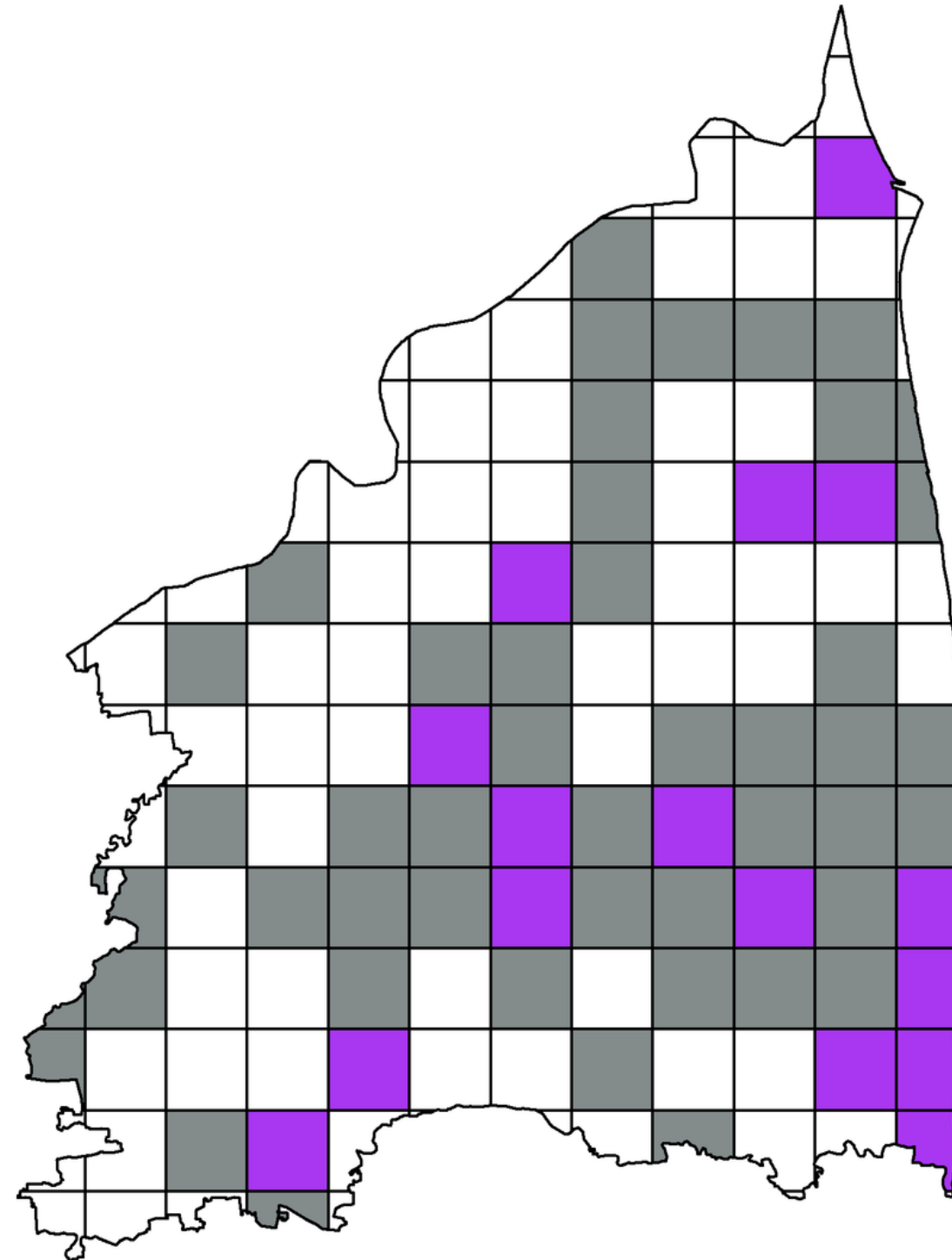
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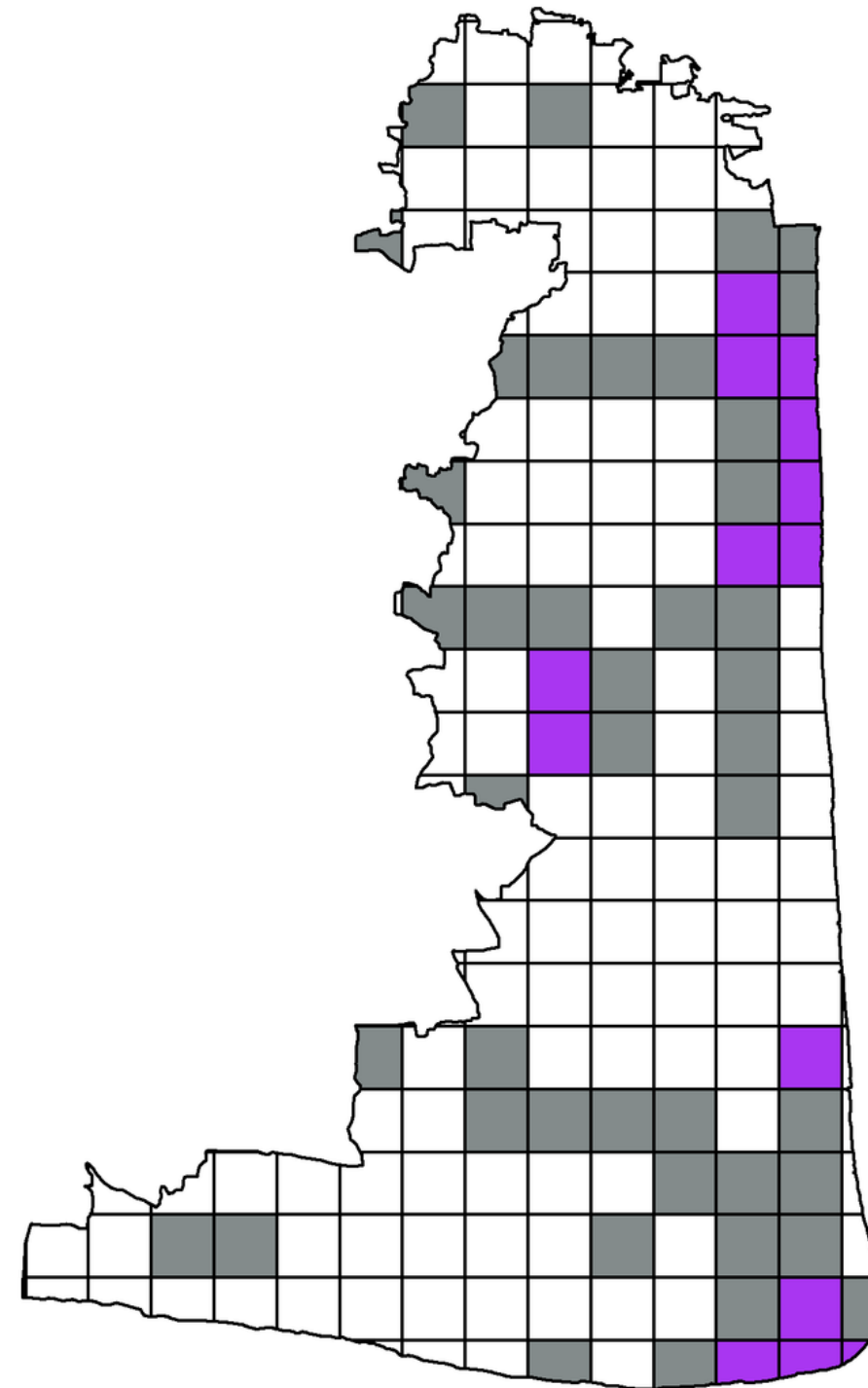
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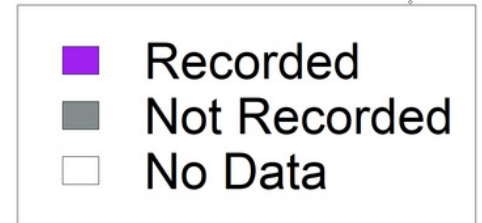
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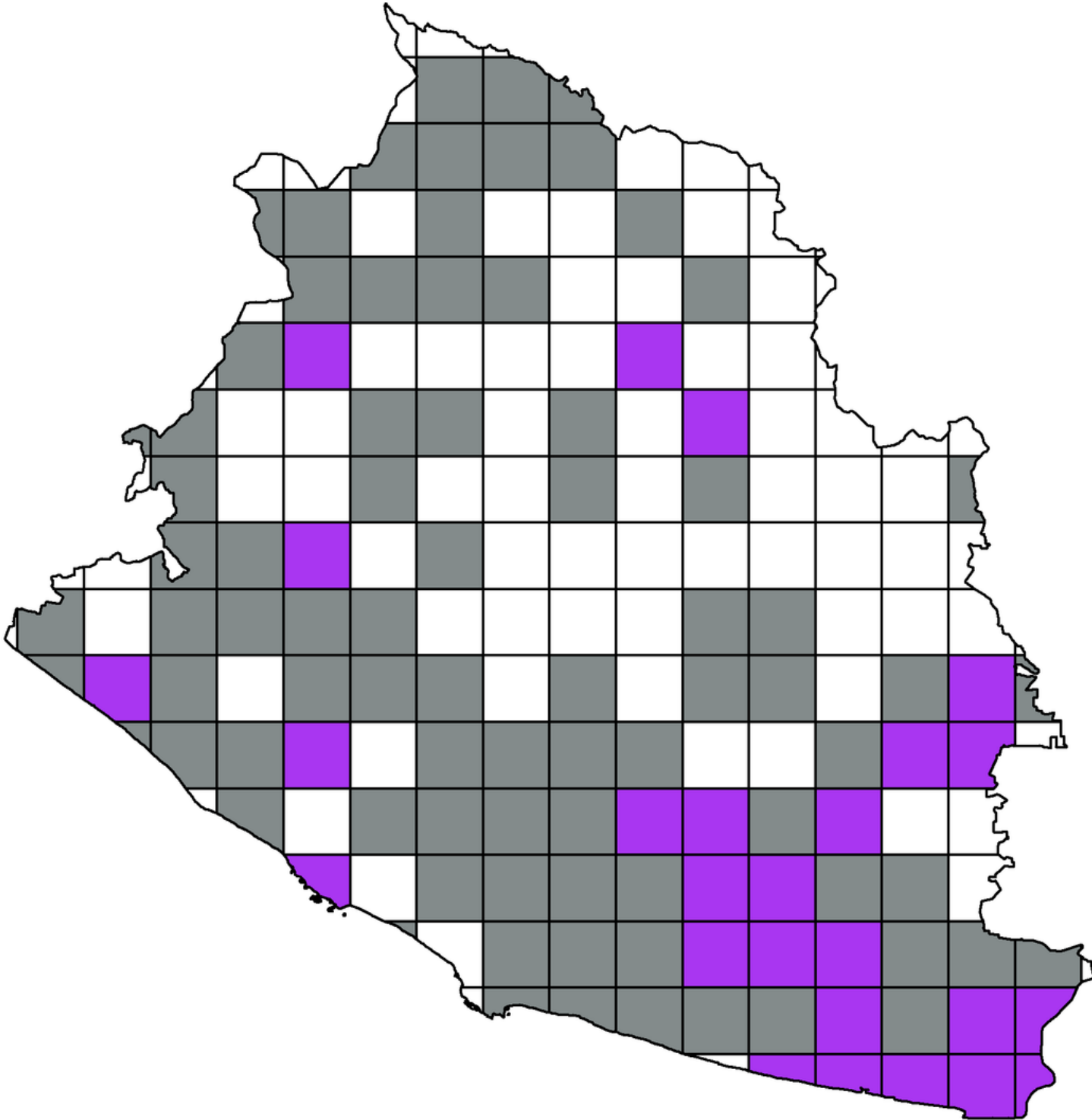
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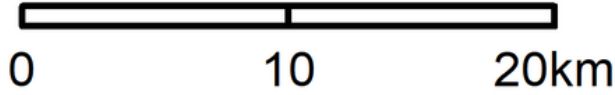


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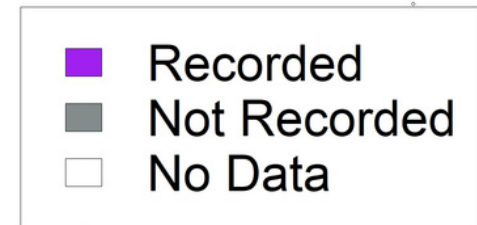
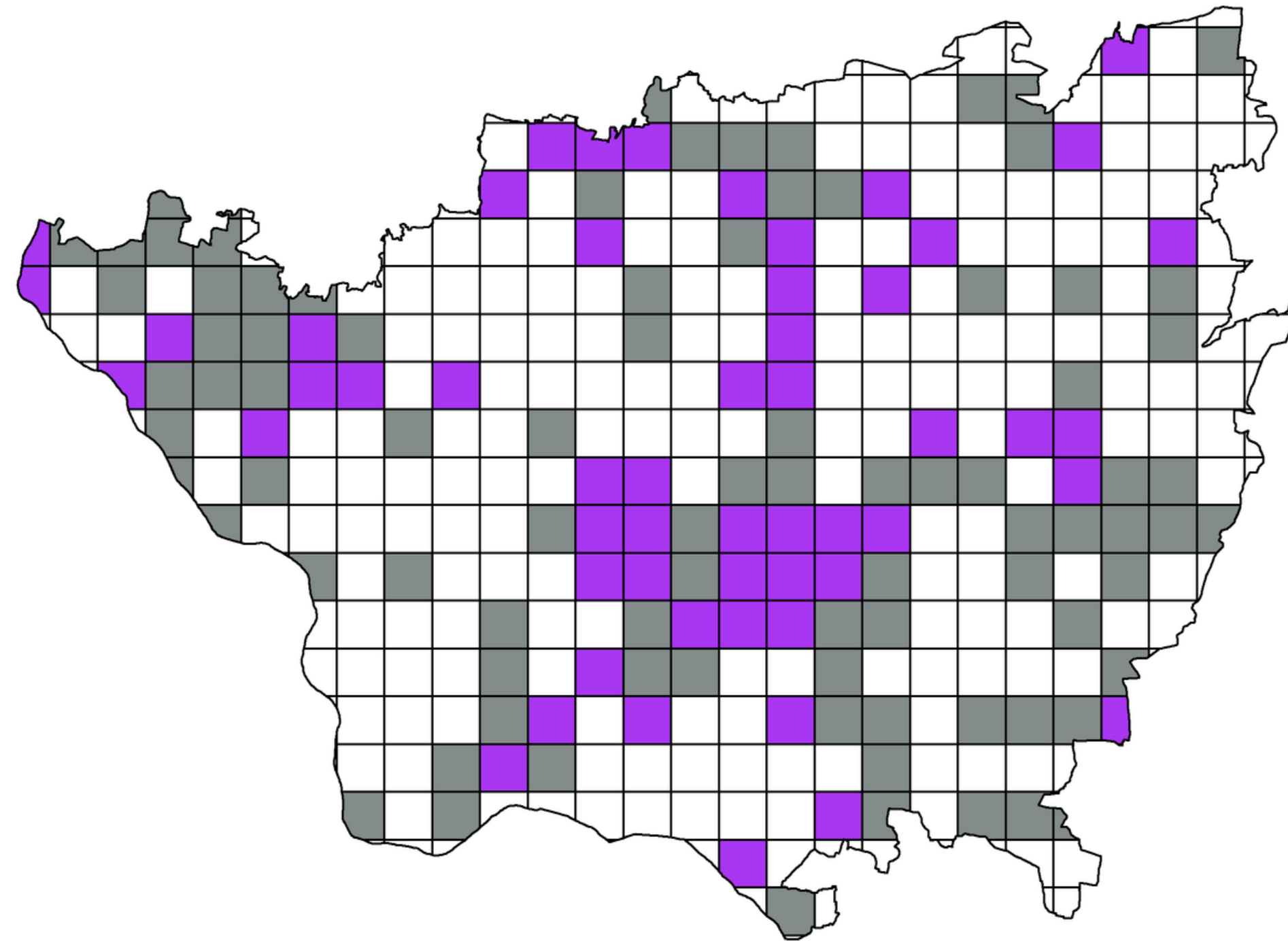


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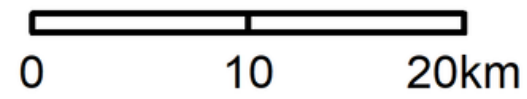
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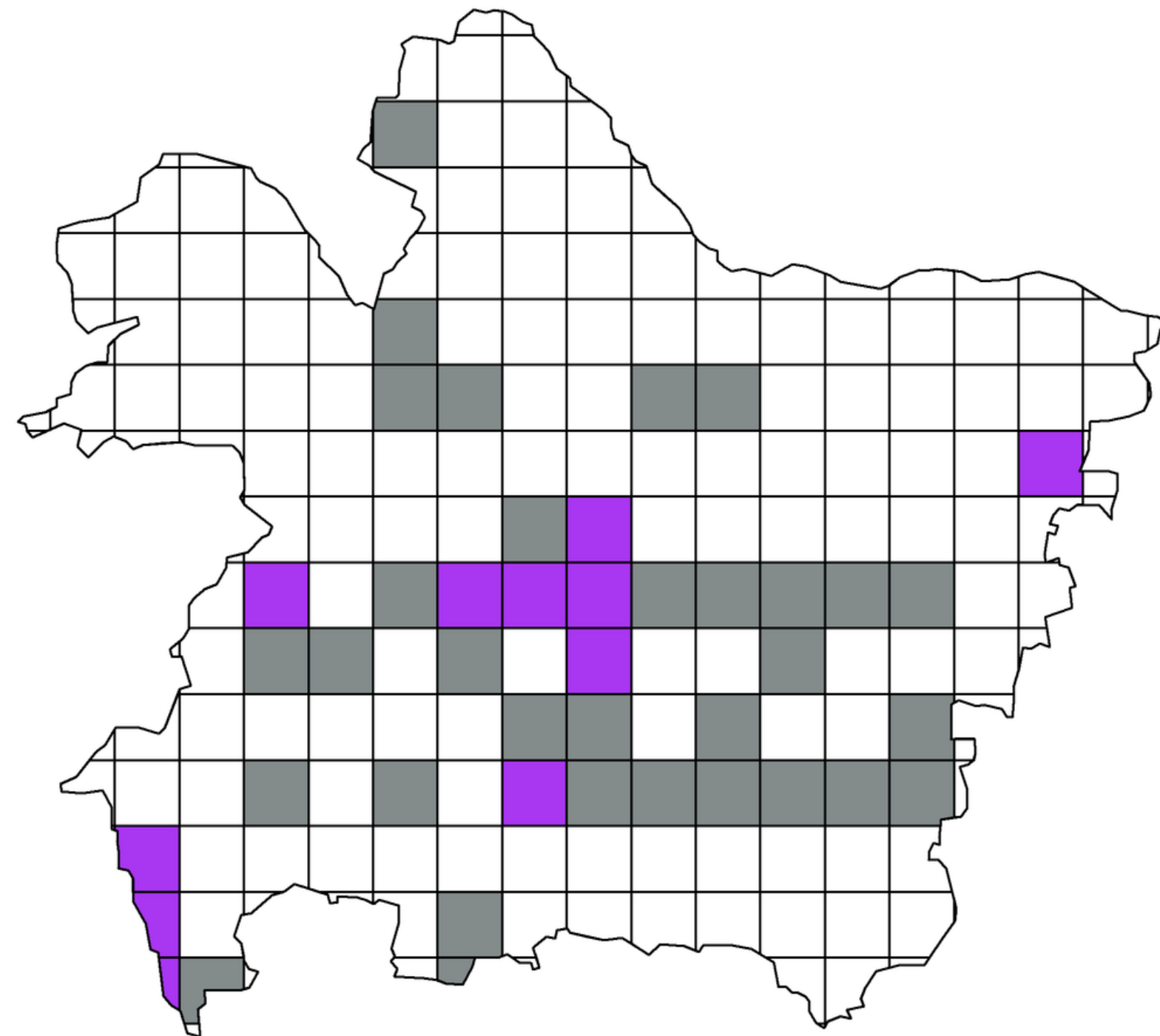
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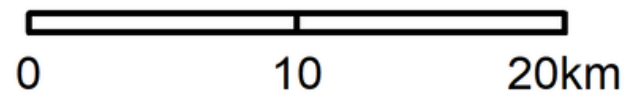
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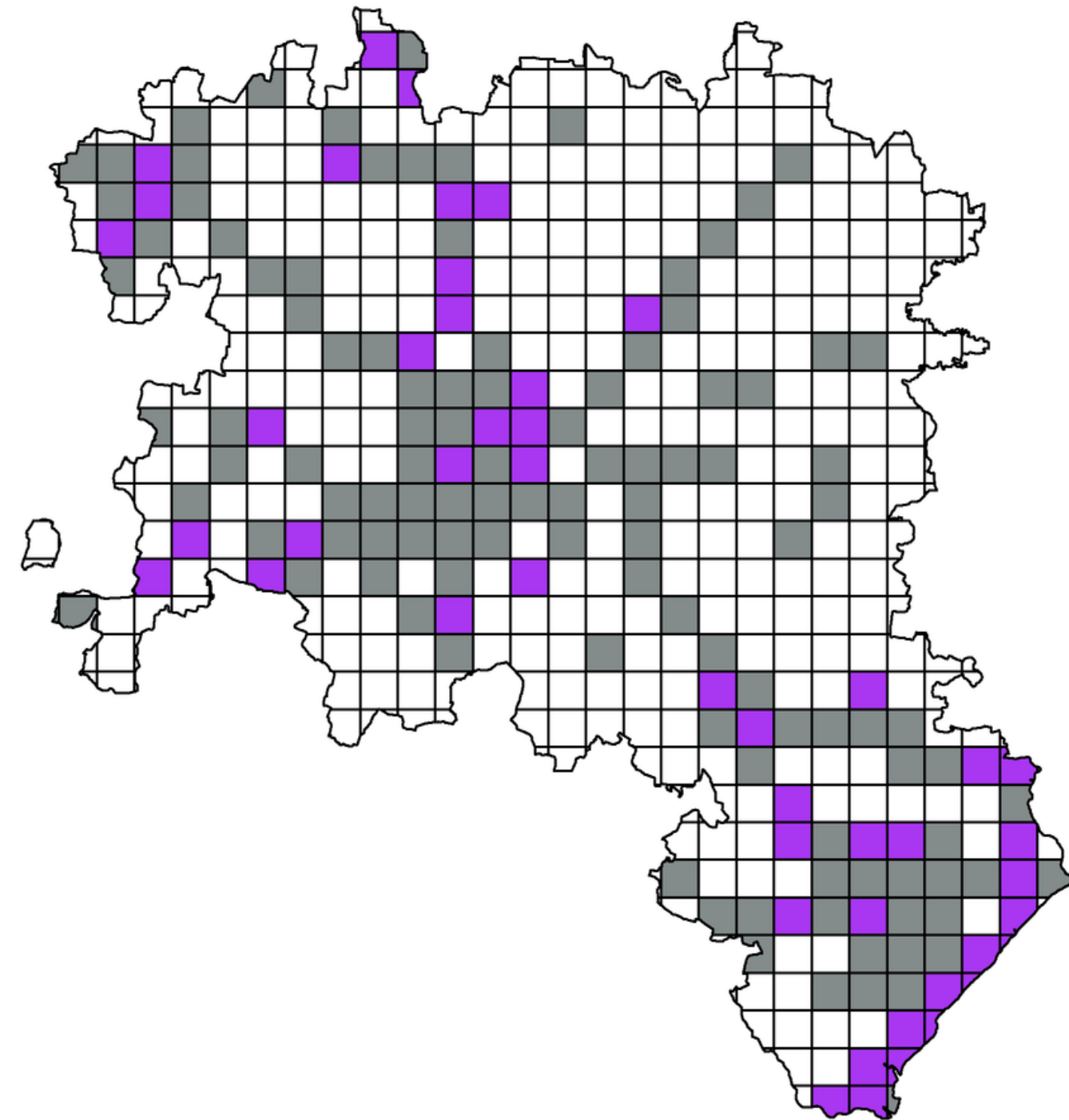
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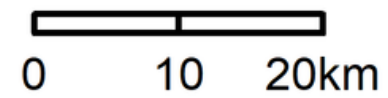
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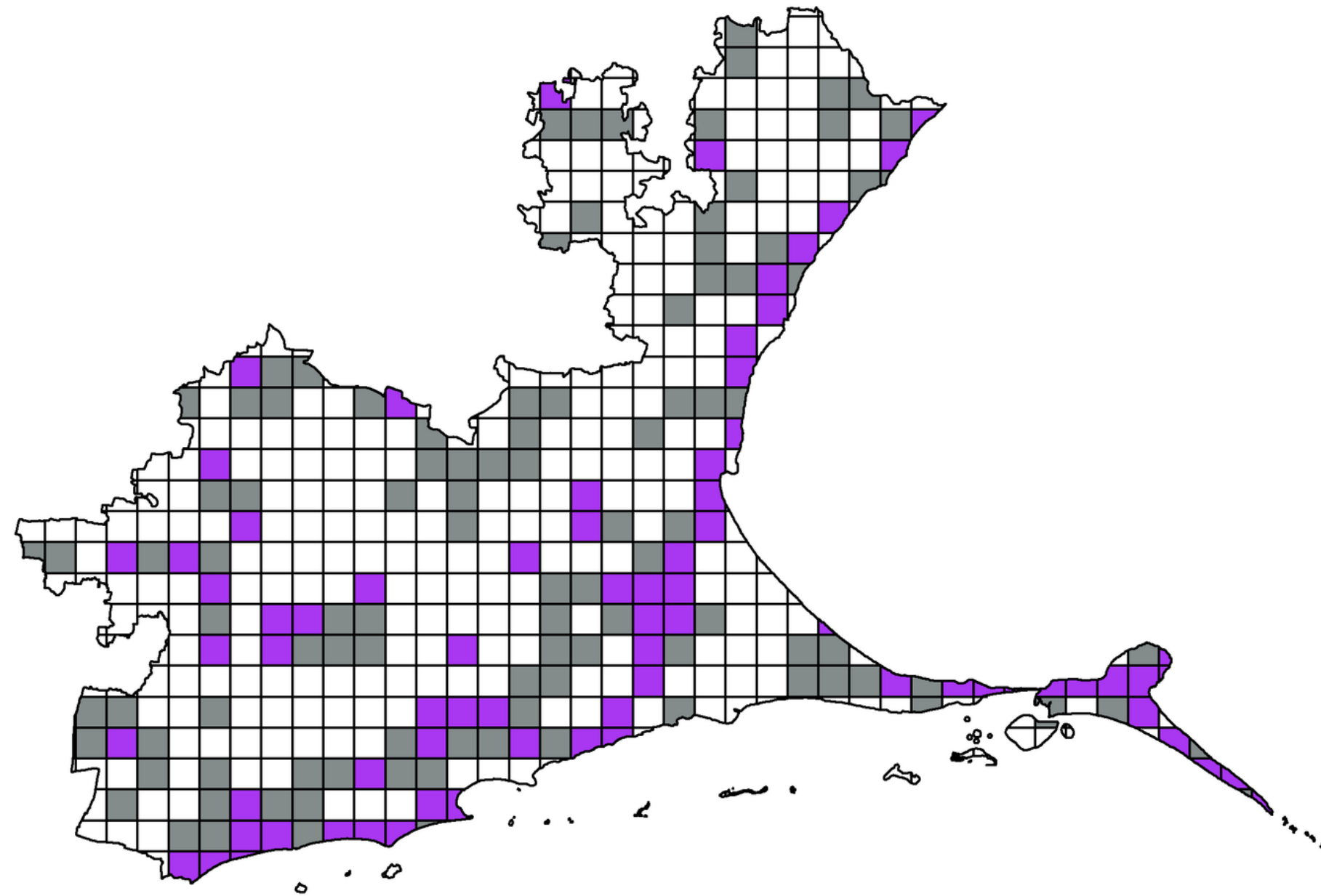
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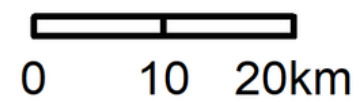
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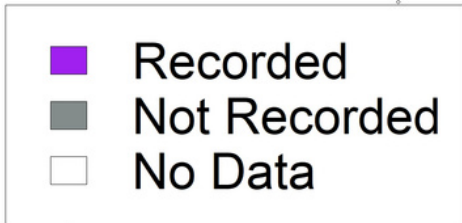
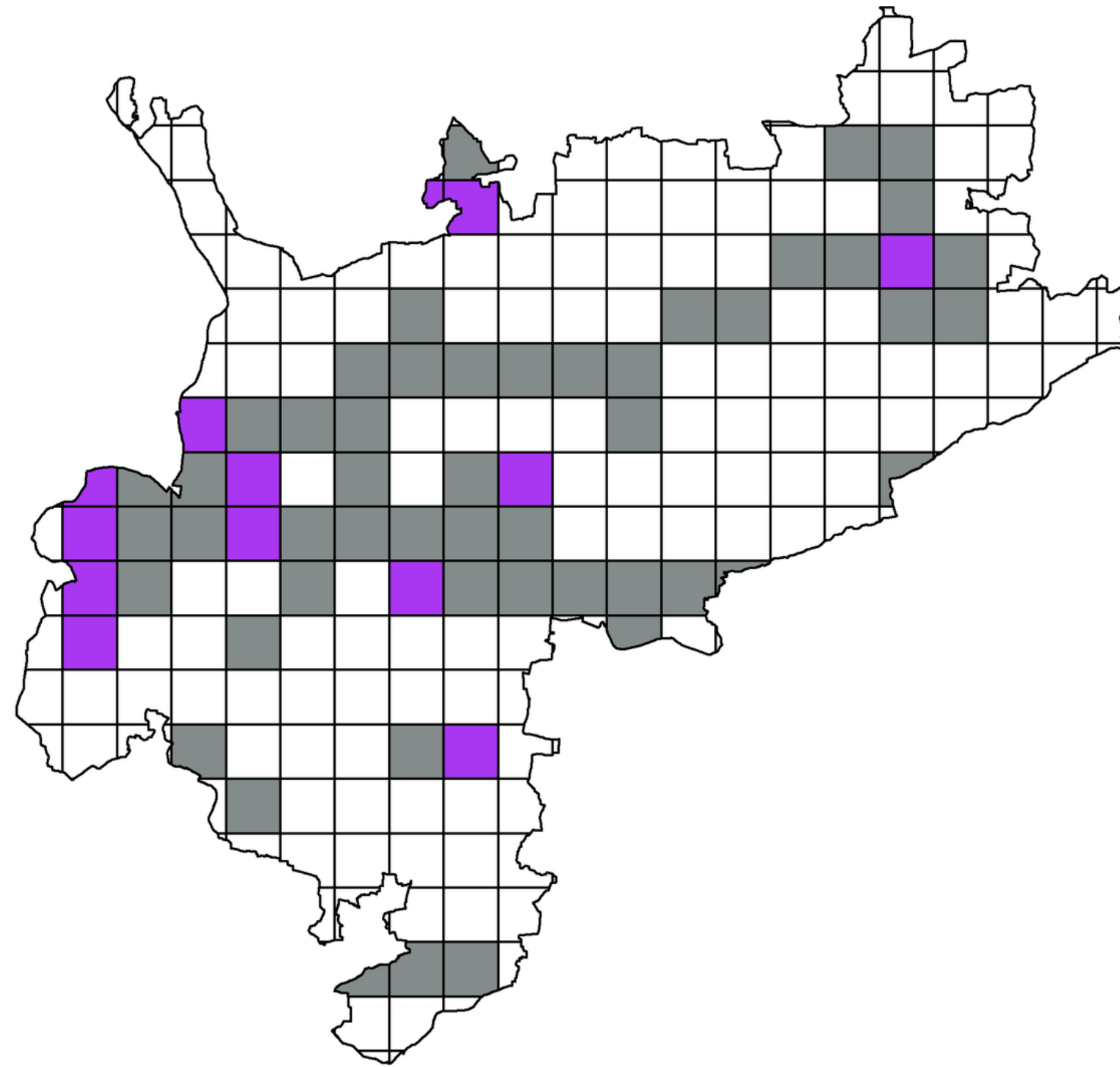
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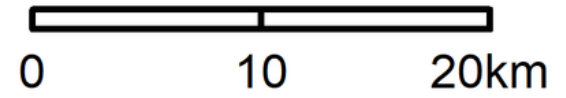
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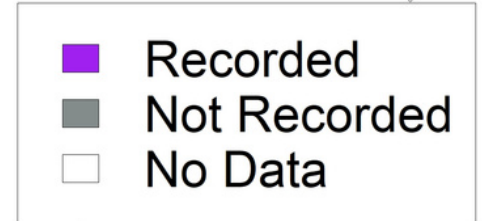
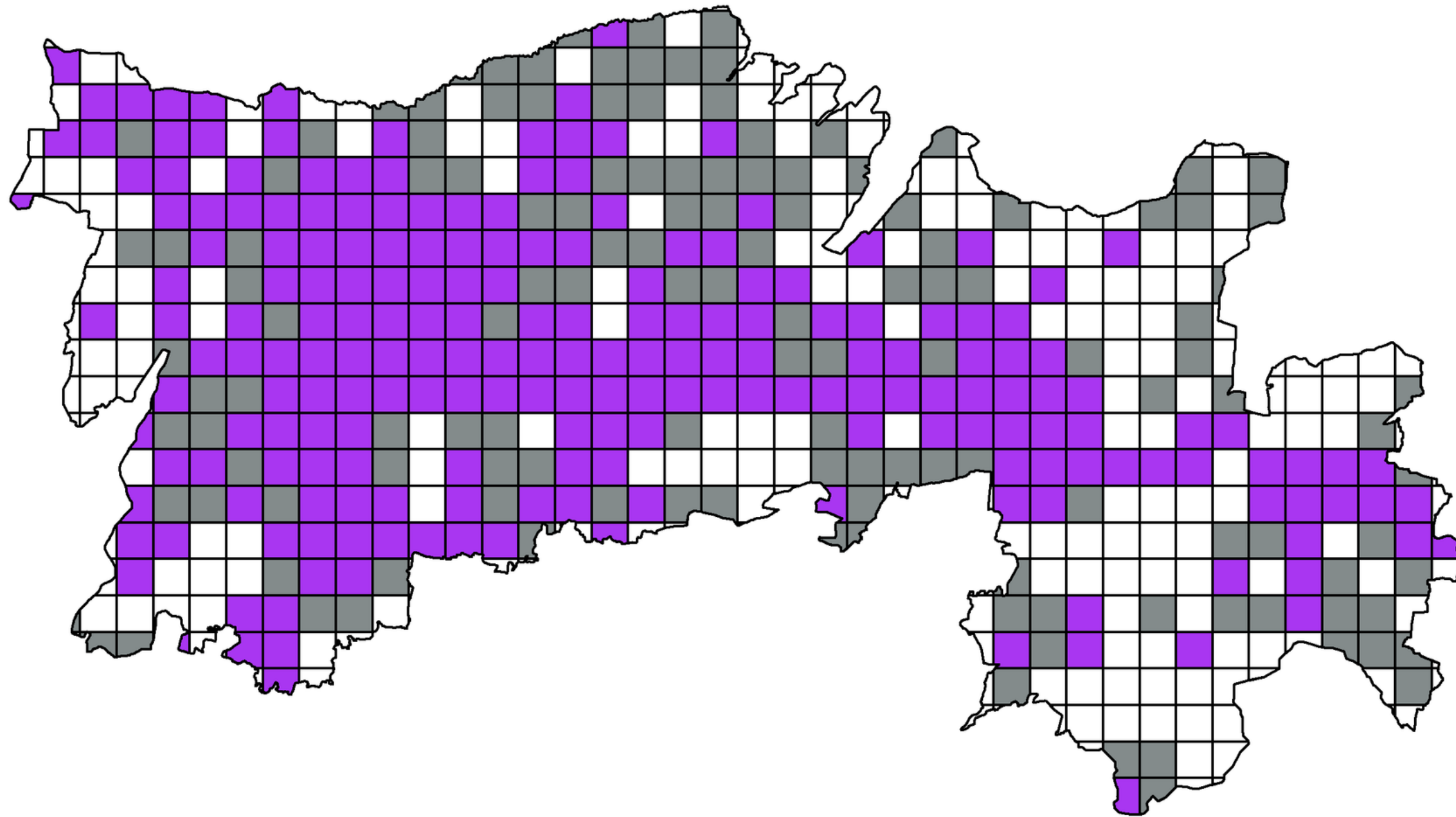
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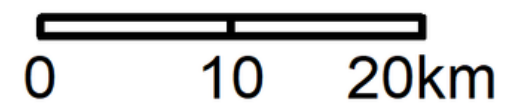
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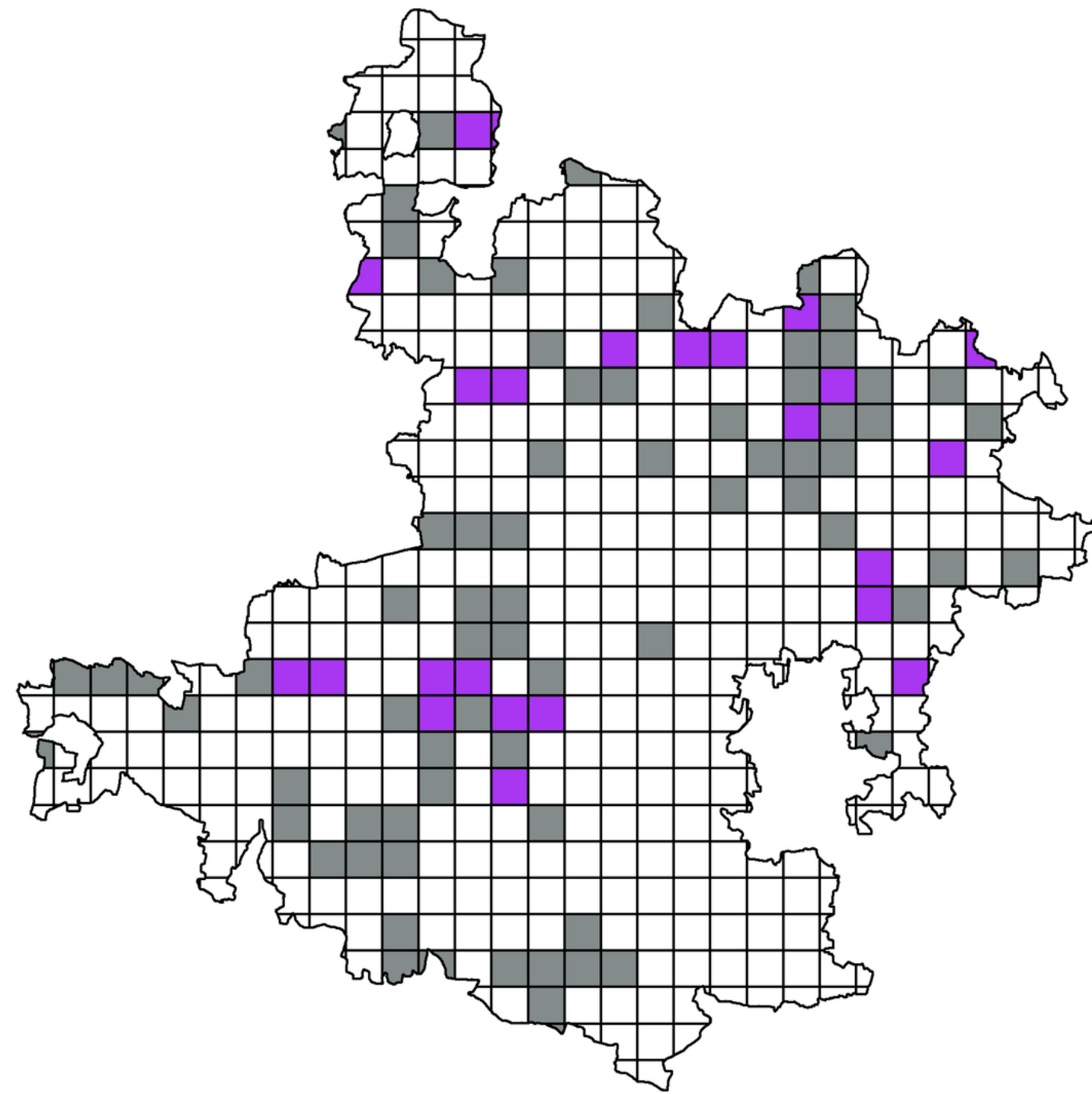
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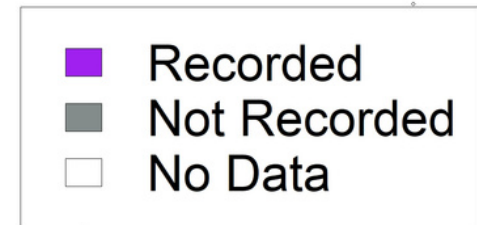
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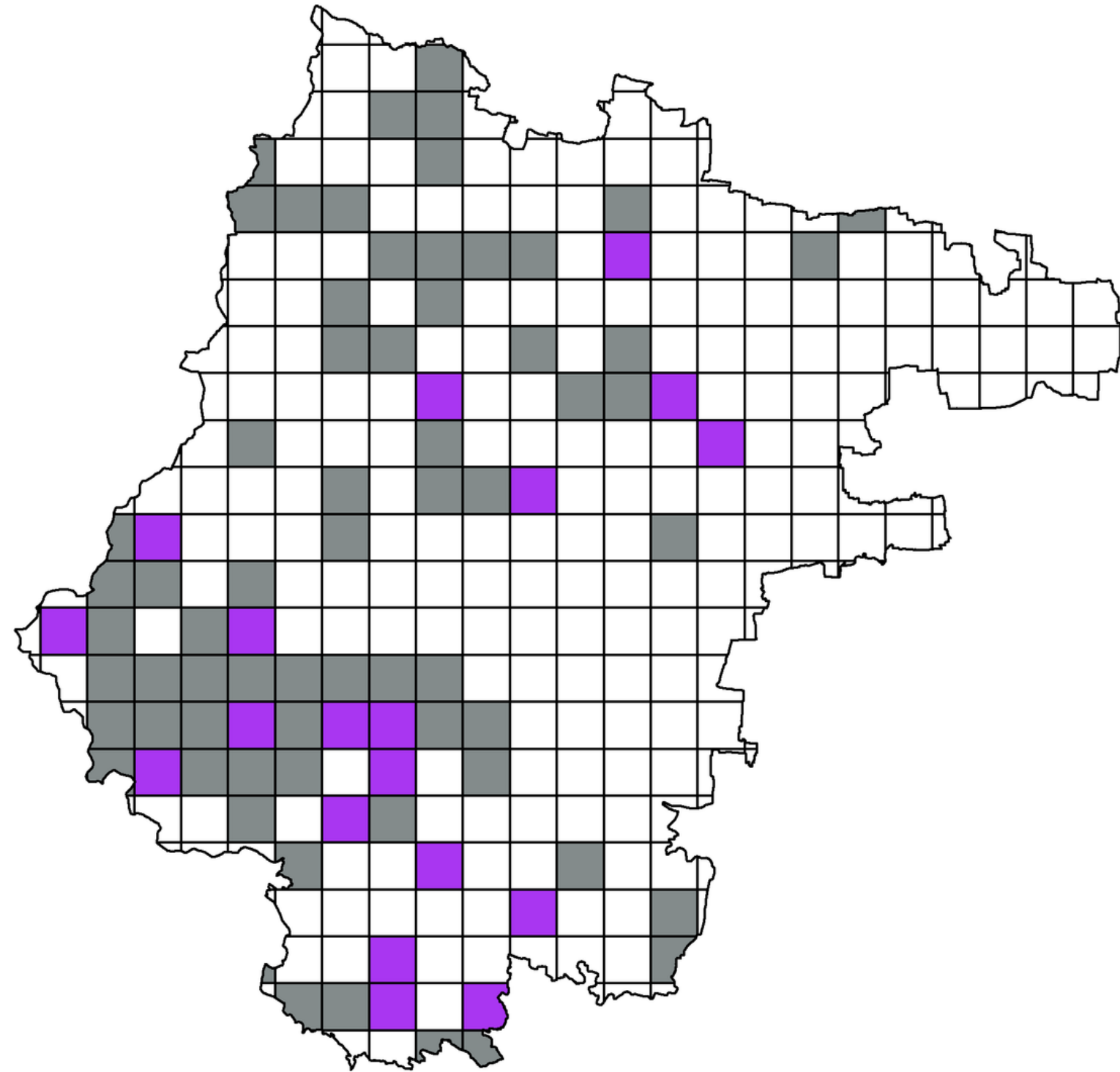
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Grid Size - 3.3 x 3.3 km



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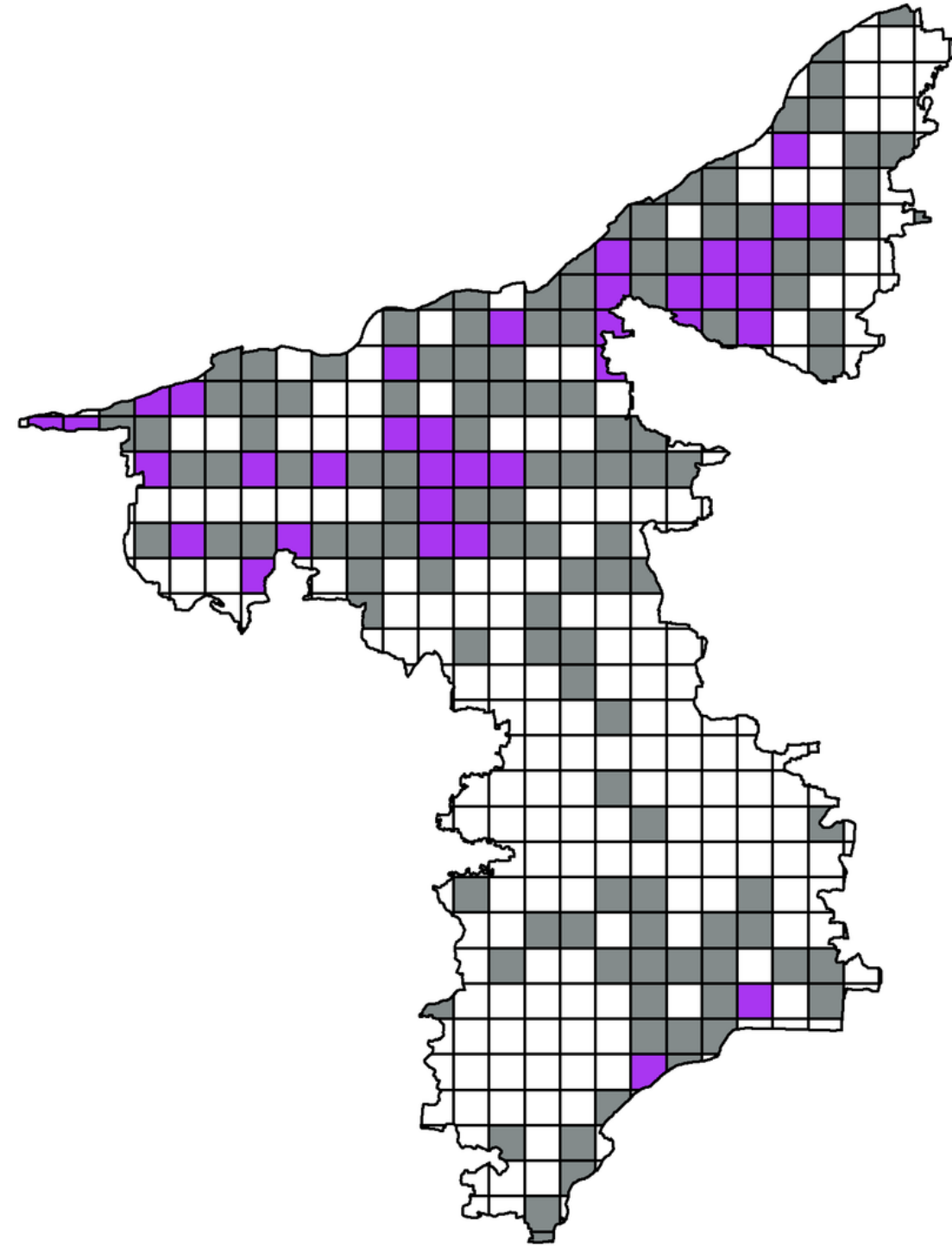
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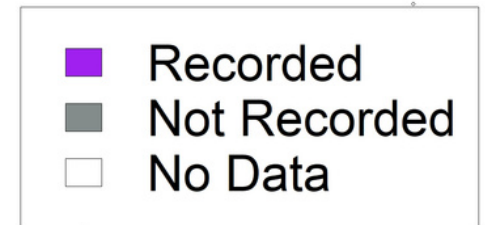
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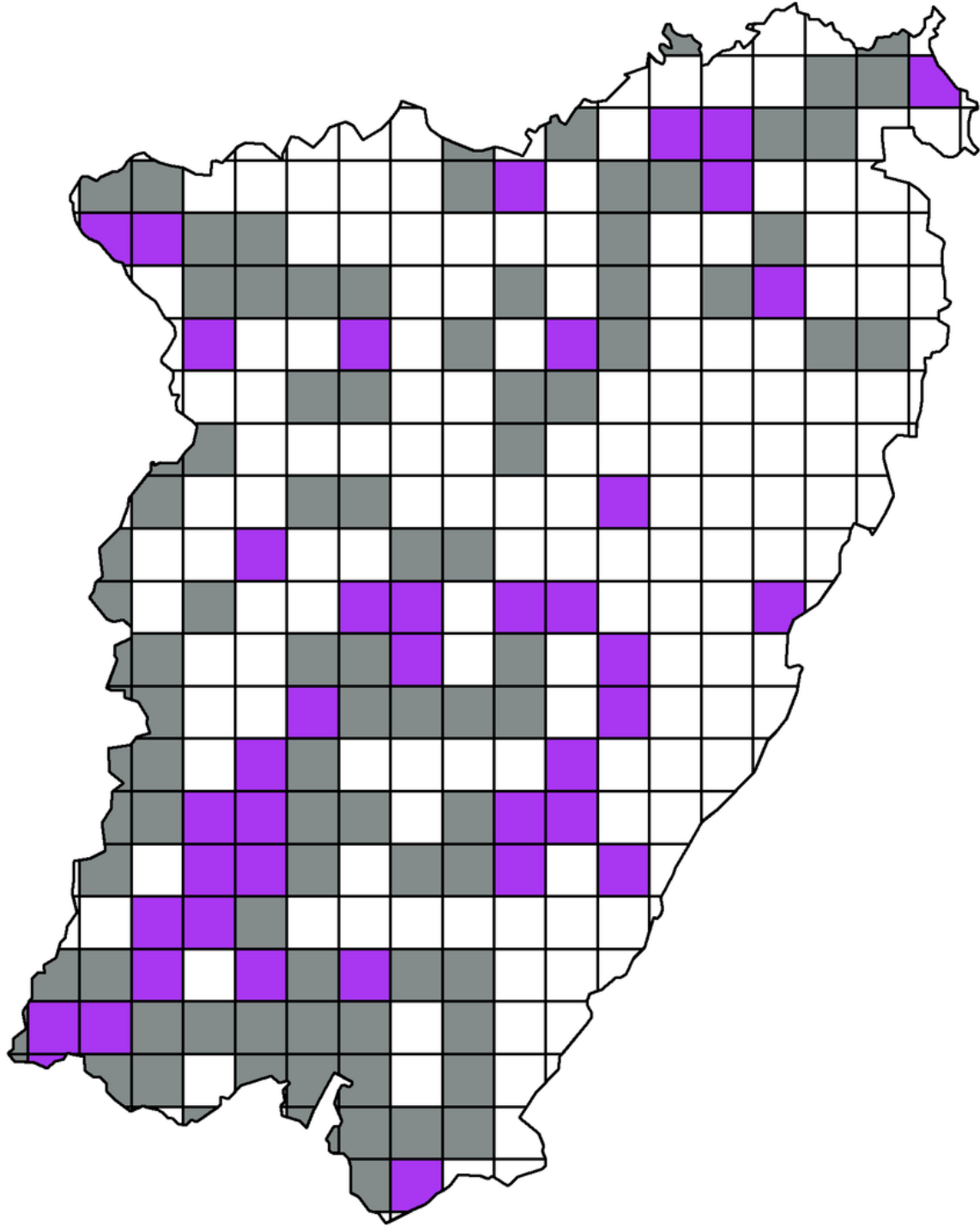
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Grid Size - 3.3 x 3.3 km





DISTRIBUTION OF HOUSE SPARROW IN THENI DISTRICT



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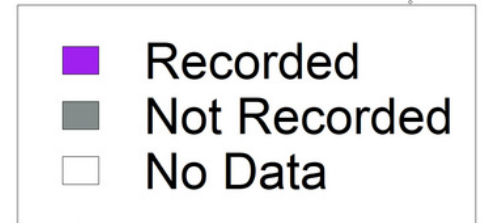
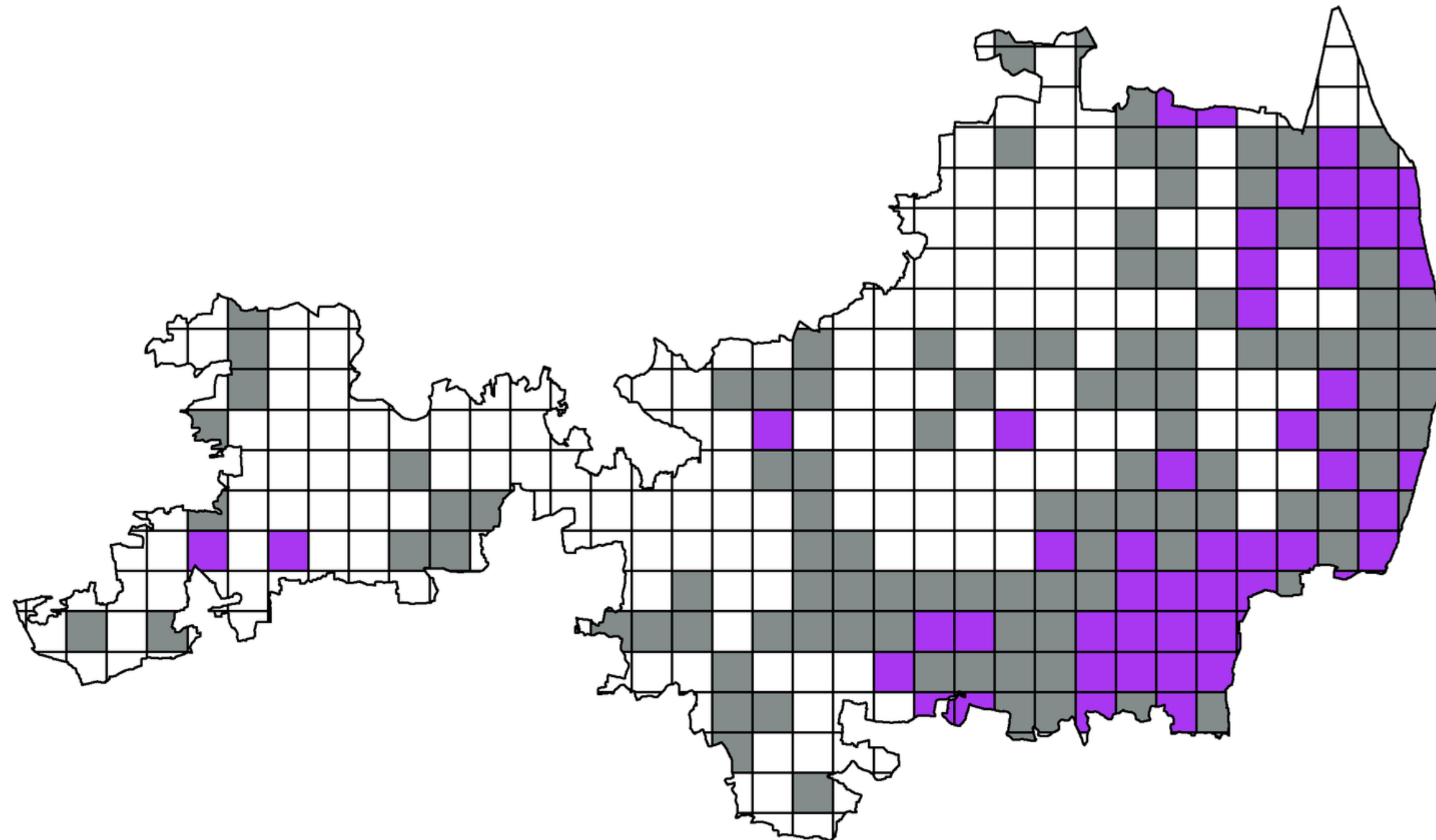


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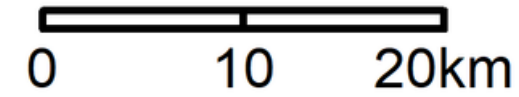
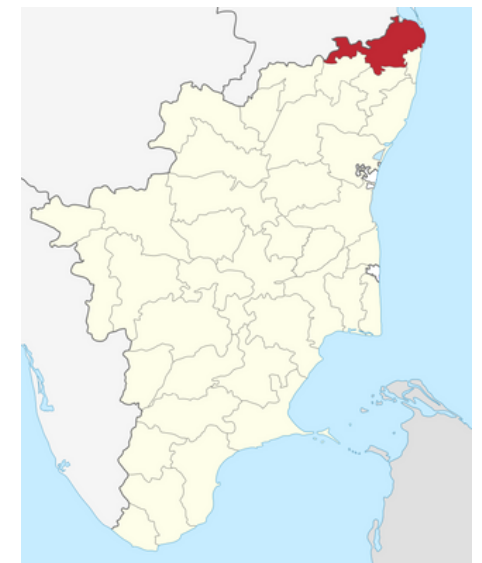
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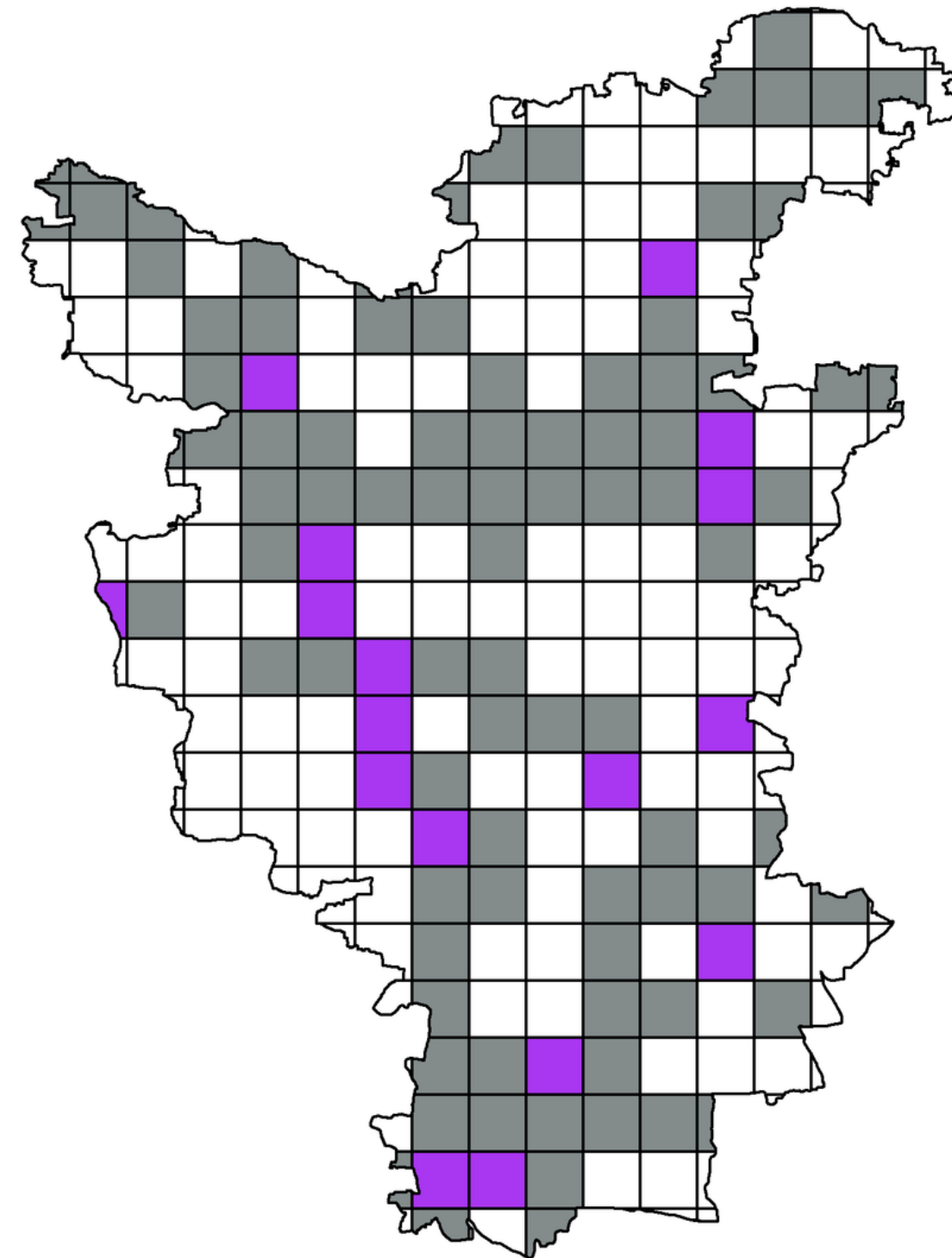
DISTRIBUTION OF HOUSE SPARROW IN THIRUVALLUR DISTRICT



Grid Size - 3.3 x 3.3 km



DISTRIBUTION OF HOUSE SPARROW IN THIRUVARUR DISTRICT



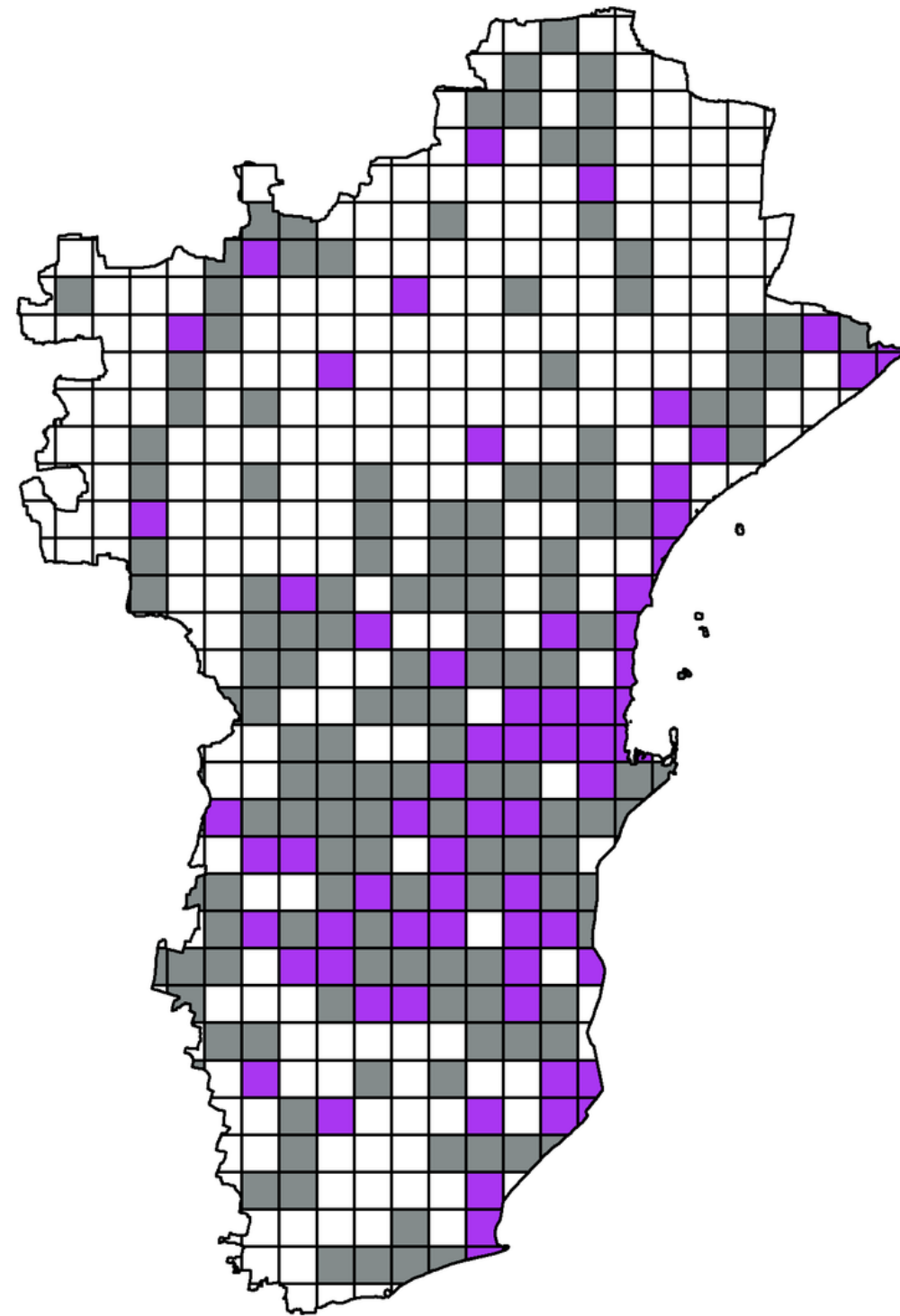
0 10 20km



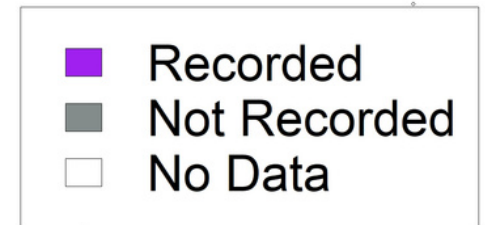
Grid Size - 3.3 x 3.3 km



DISTRIBUTION OF HOUSE SPARROW IN THOOTHUKUDI DISTRICT



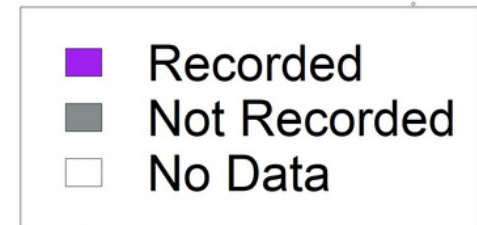
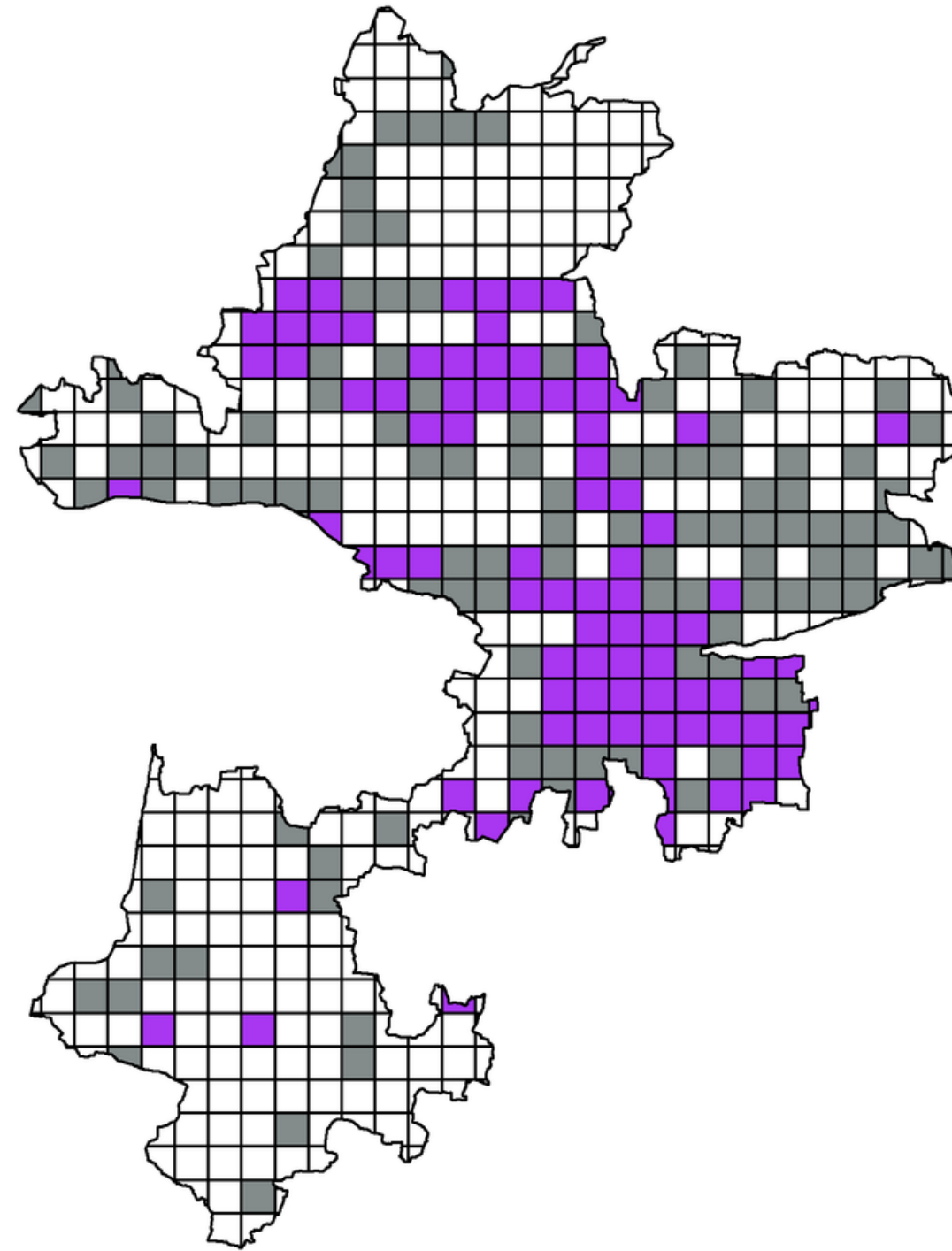
0 10 20km



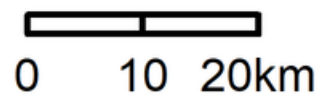
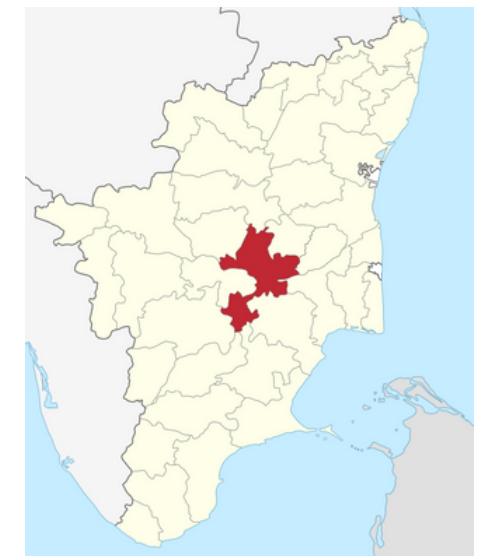
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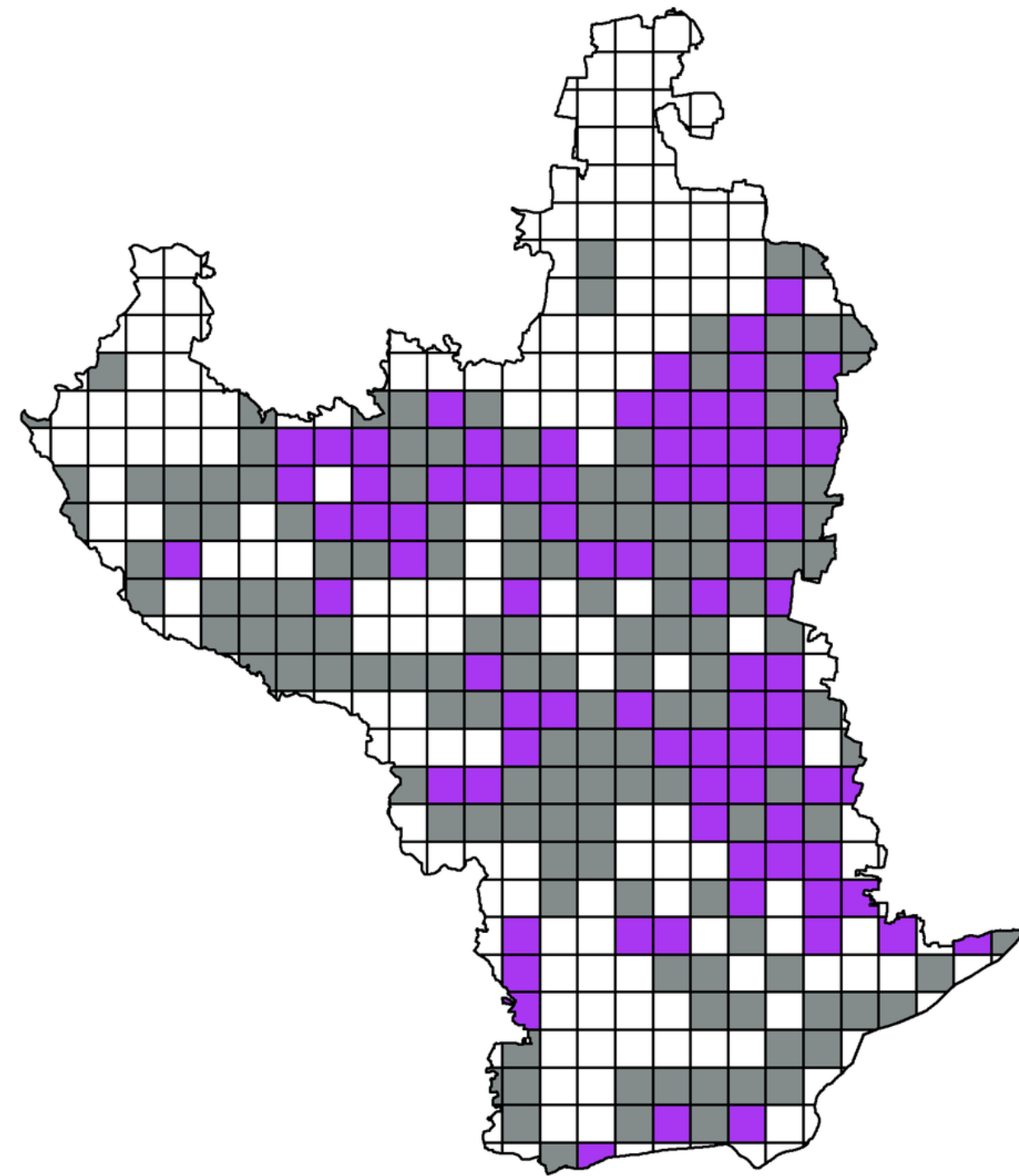
DISTRIBUTION OF HOUSE SPARROW IN TIRUCHIRAPALLI DISTRICT



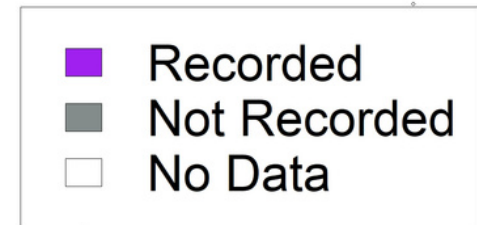
Grid Size - 3.3 x 3.3 km



DISTRIBUTION OF HOUSE SPARROW IN THIRUNELVELI DISTRICT



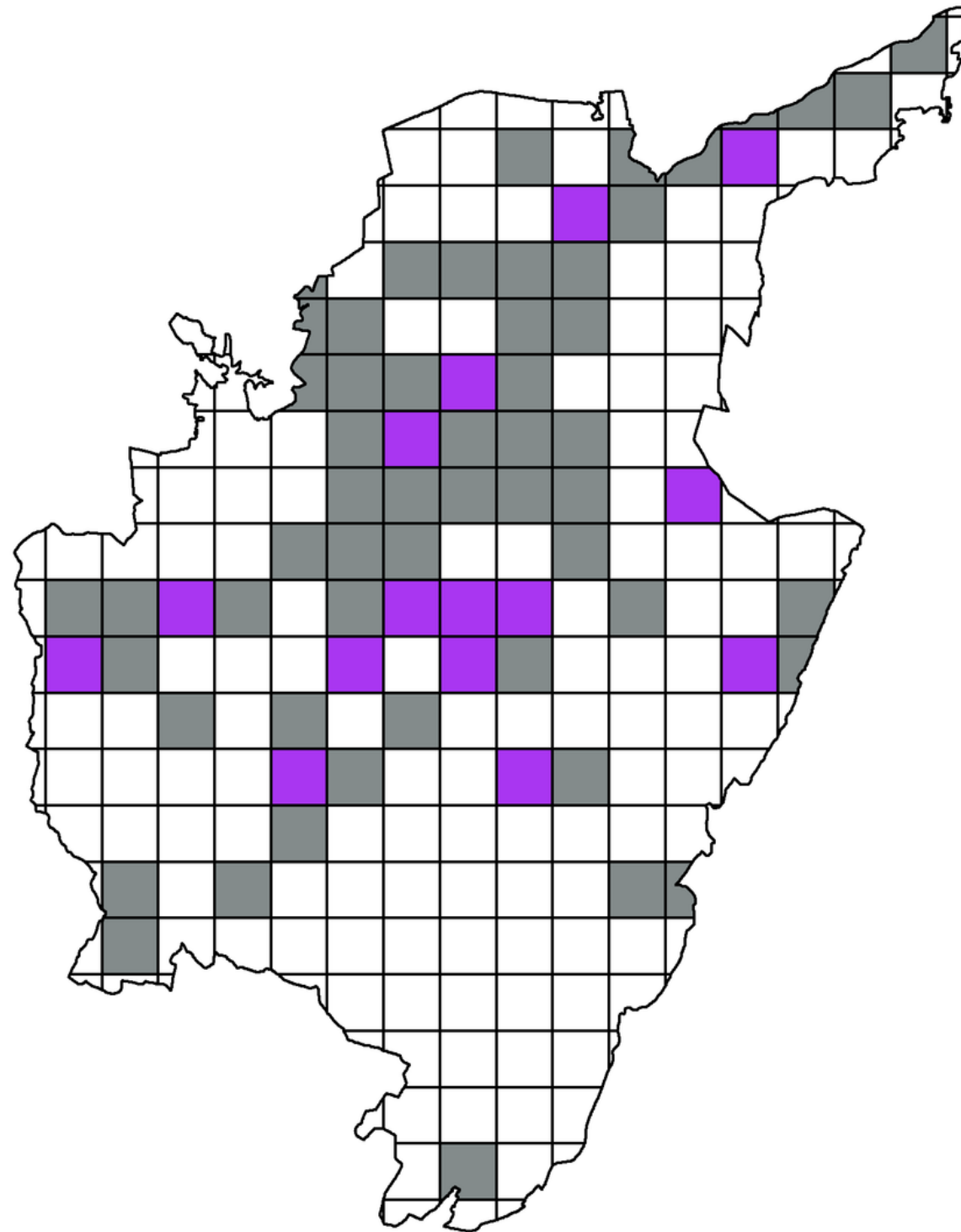
0 10 20km



Grid Size - 3.3 x 3.3 km



DISTRIBUTION OF HOUSE SPARROW IN TIRUPATHUR DISTRICT



0 10 20km

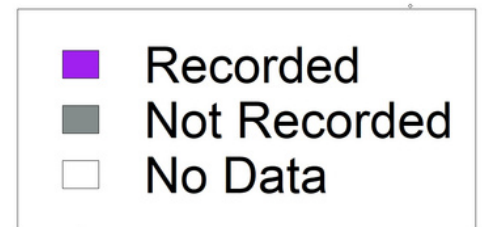
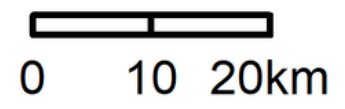
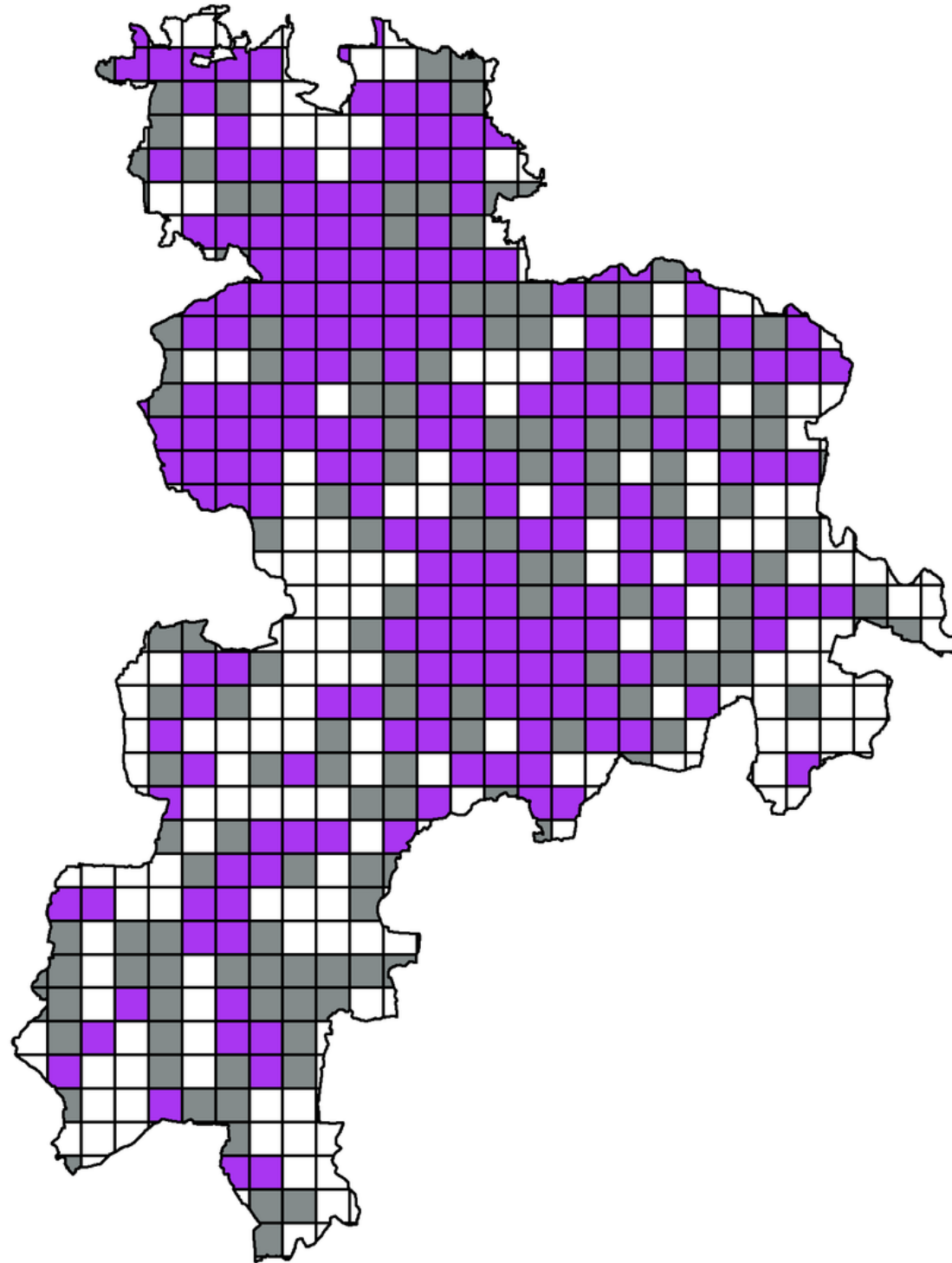


Recorded
Not Recorded
No Data

Grid Size - 3.3 x 3.3 km



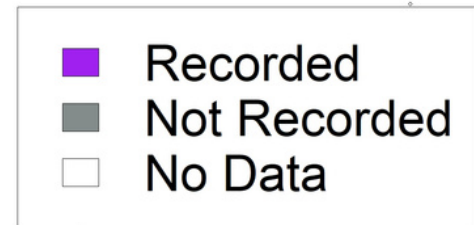
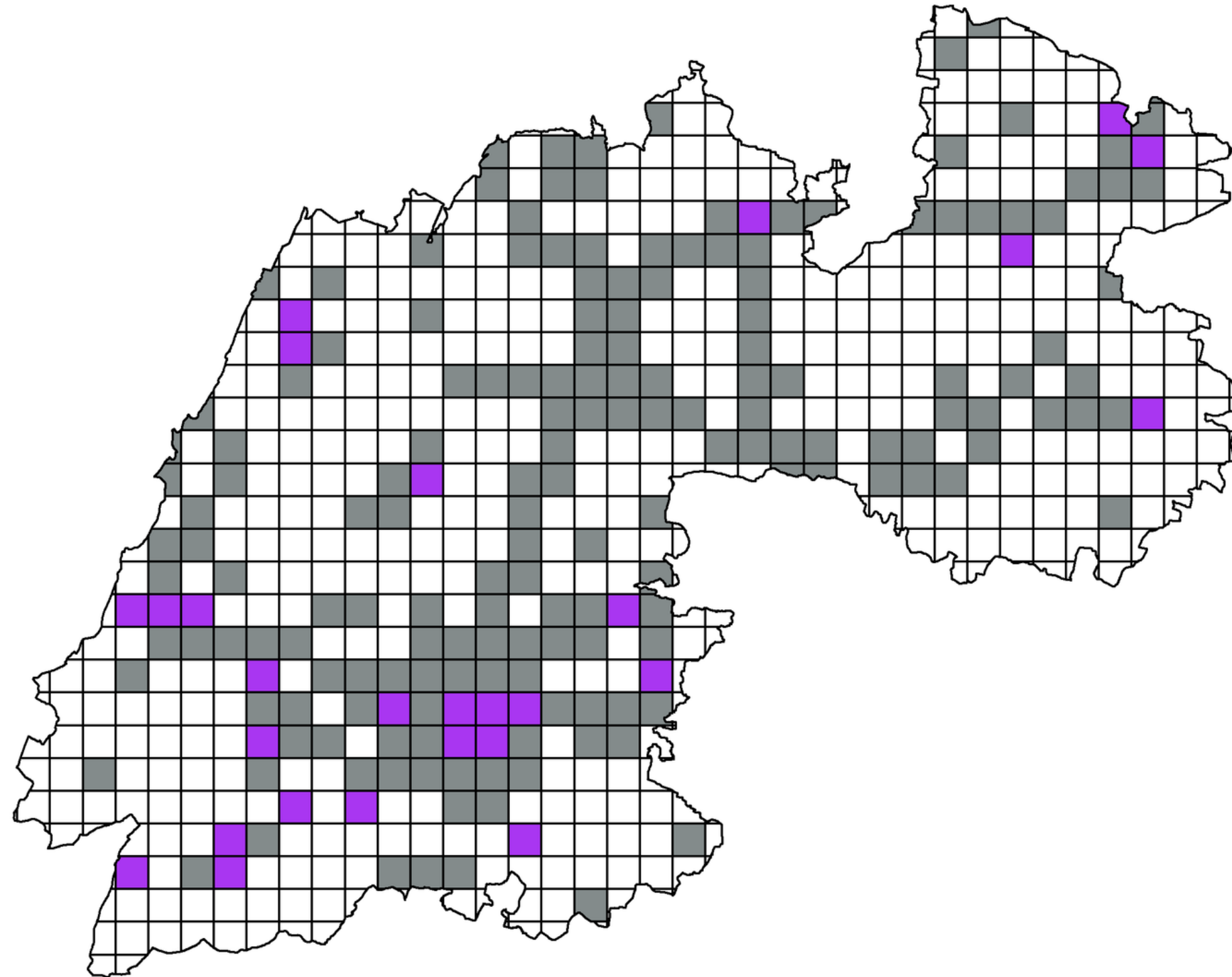
DISTRIBUTION OF HOUSE SPARROW IN TIRUPPUR DISTRICT



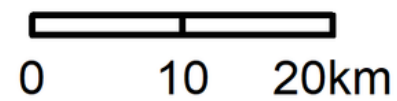
Grid Size - 3.3 x 3.3 km



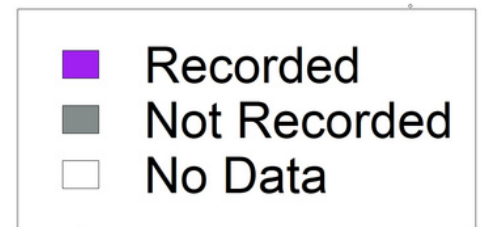
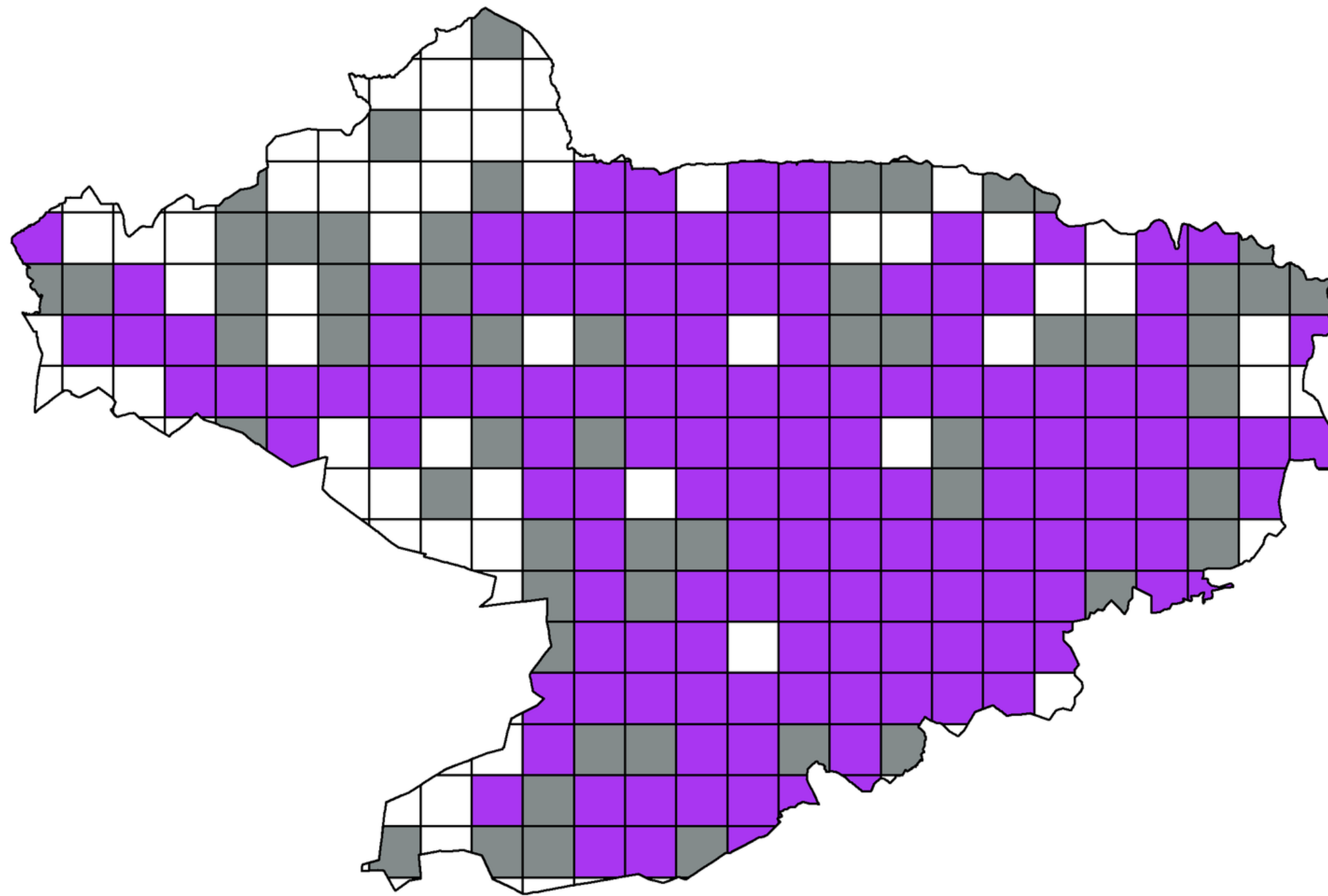
DISTRIBUTION OF HOUSE SPARROW IN TIRUVANNAMALAI DISTRICT



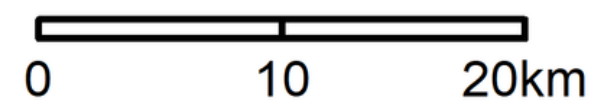
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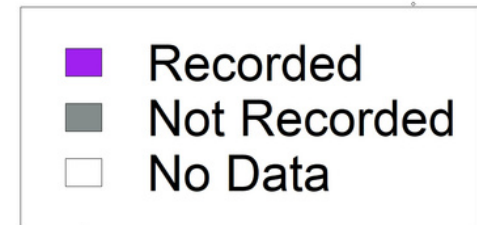
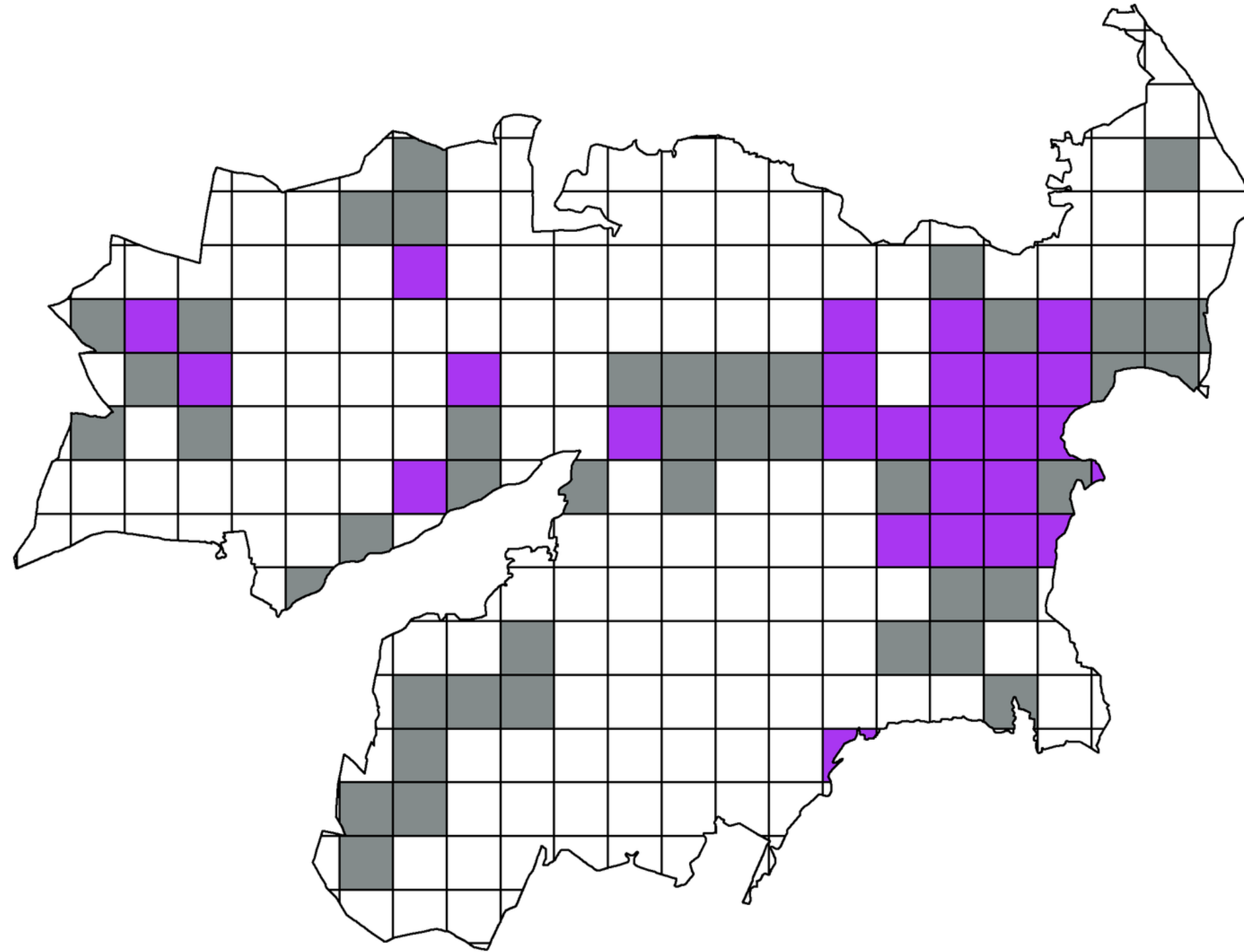
DISTRIBUTION OF HOUSE SPARROW IN THE NILGIRIS DISTRICT



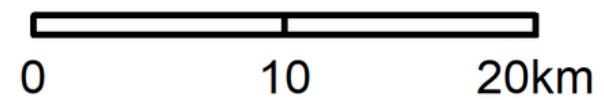
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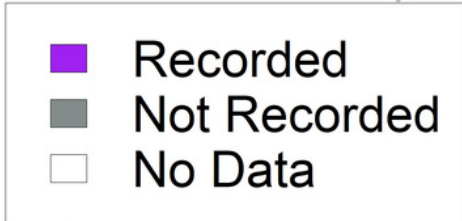
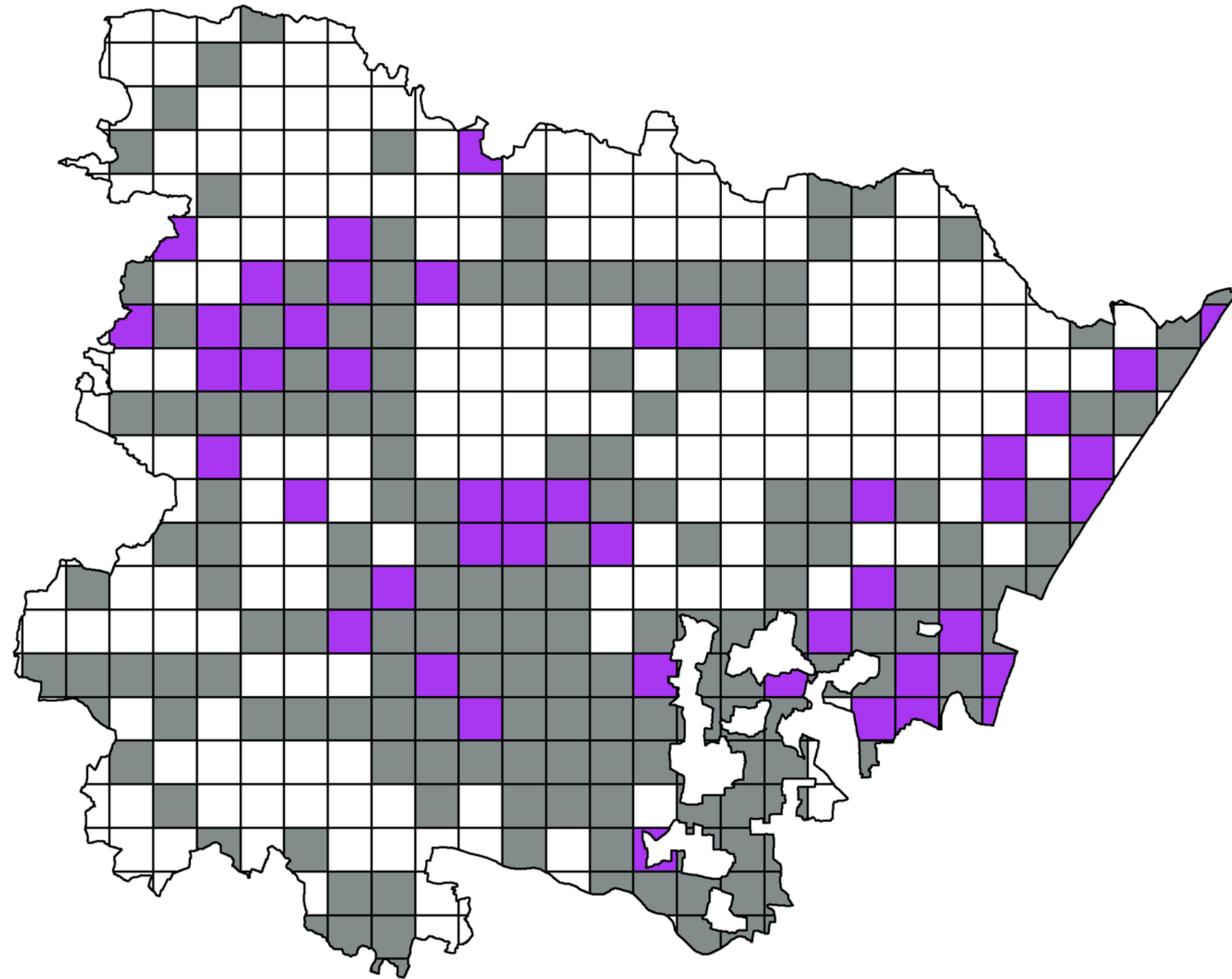
DISTRIBUTION OF HOUSE SPARROW IN VELLORE DISTRICT



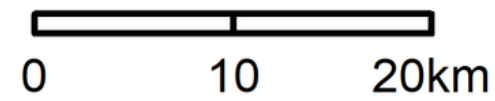
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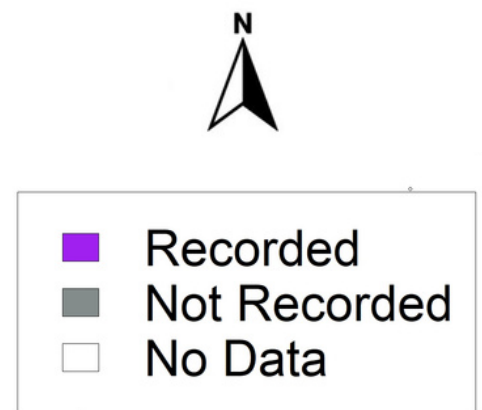
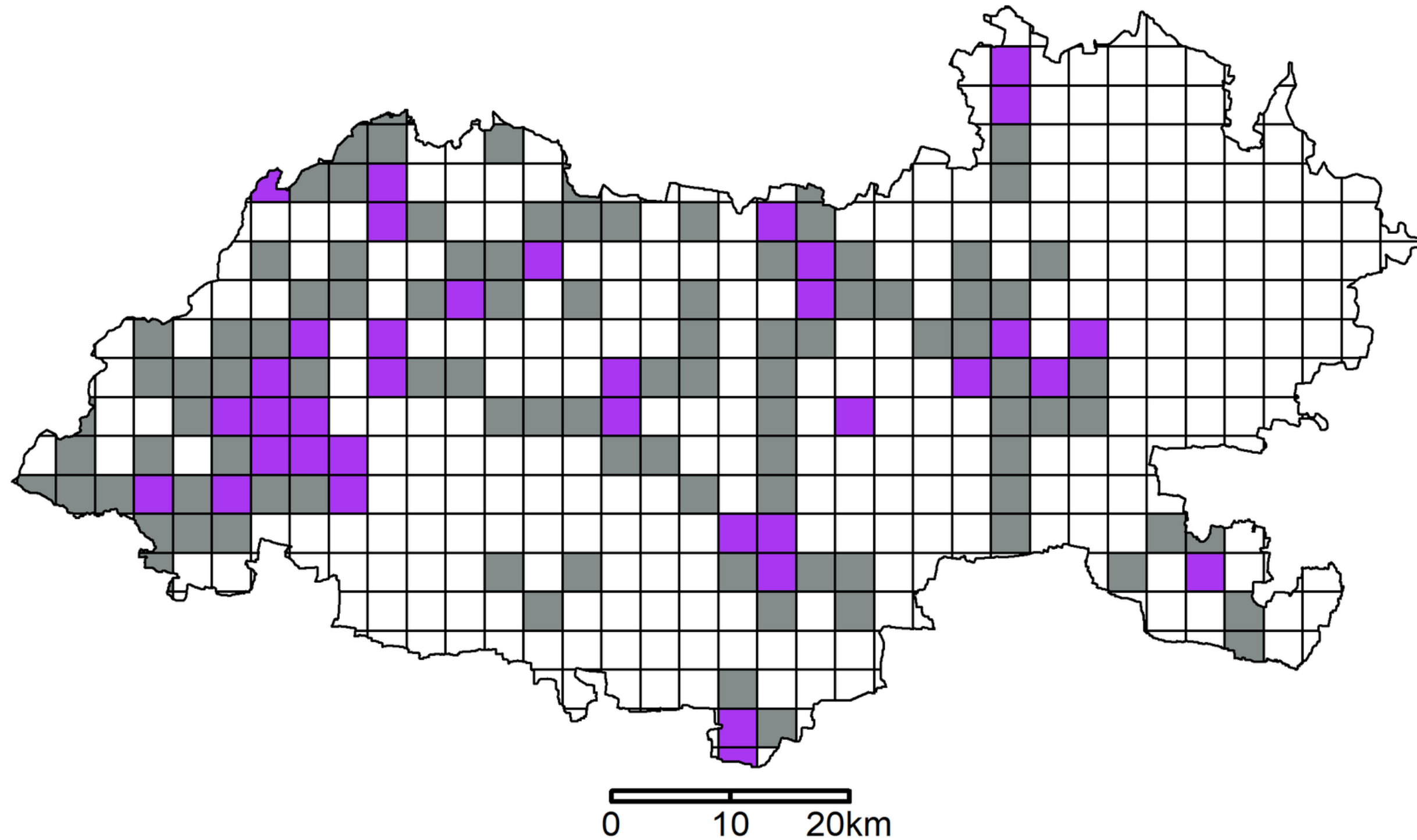
DISTRIBUTION OF HOUSE SPARROW IN VILUPPURAM DISTRICT



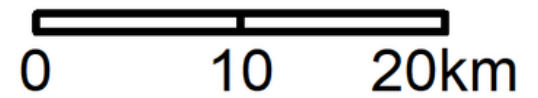
Grid Size - 3.3 x 3.3 km



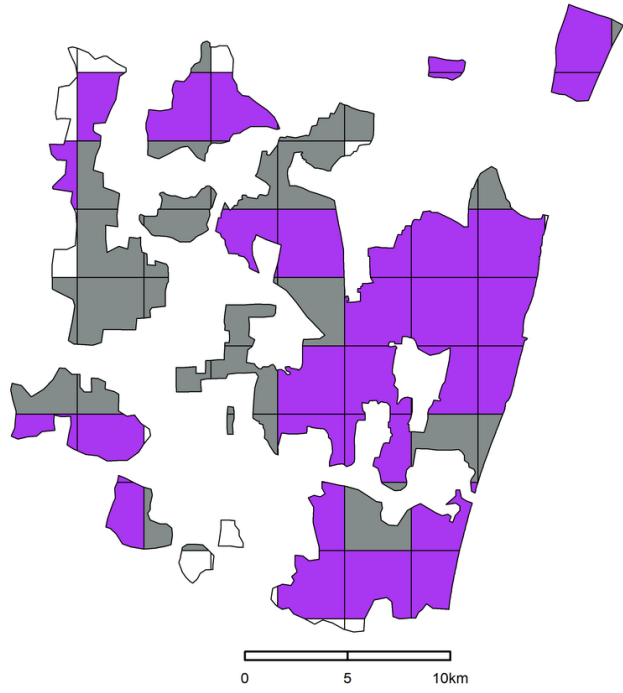
DISTRIBUTION OF HOUSE SPARROW IN VIRUDHUNAGAR DISTRICT



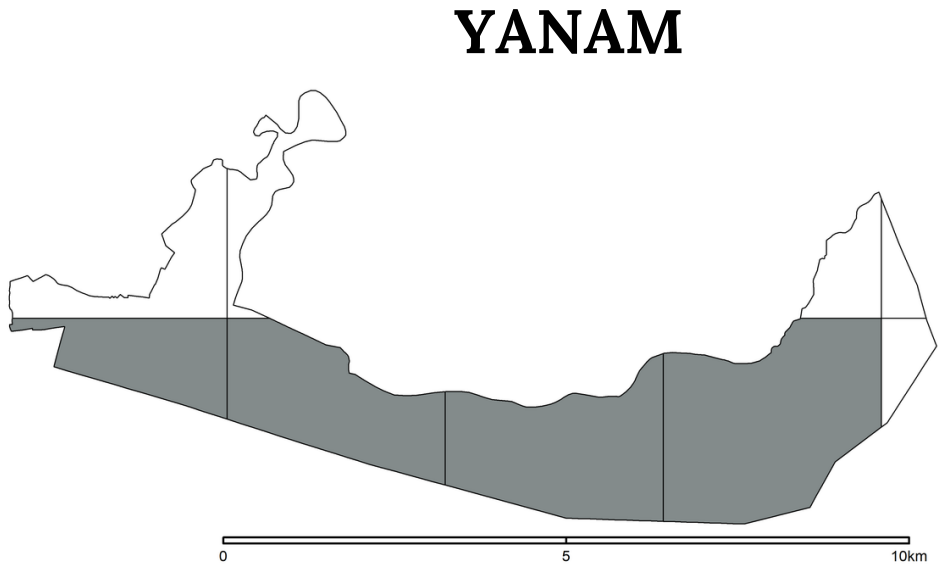
Grid Size - 3.3 x 3.3 km



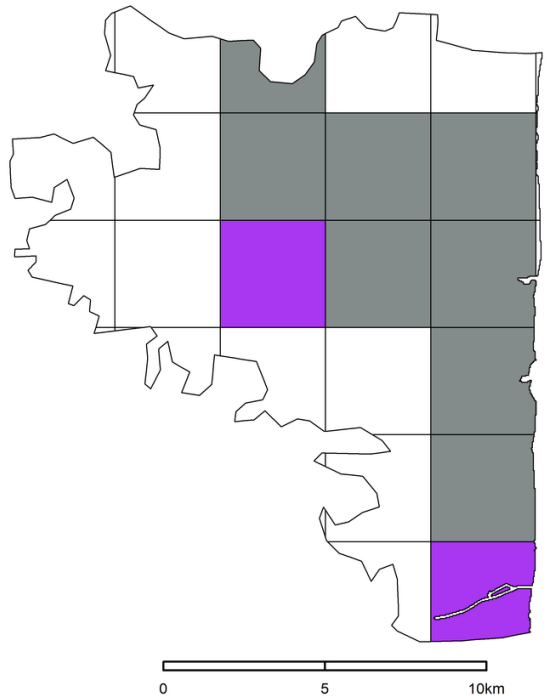
DISTRIBUTION OF HOUSE SPARROW IN PUDUCHERRY (UT)



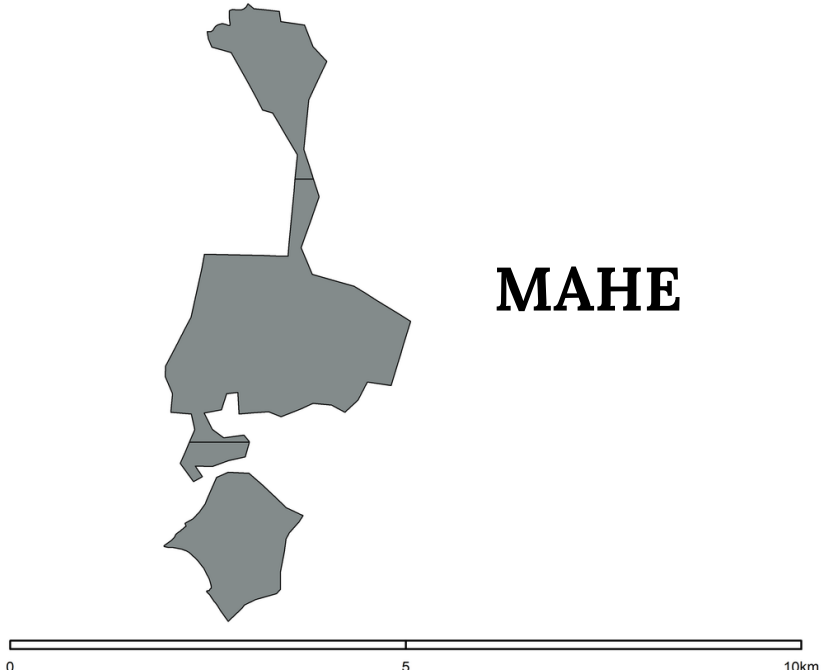
PUDUCHERRY



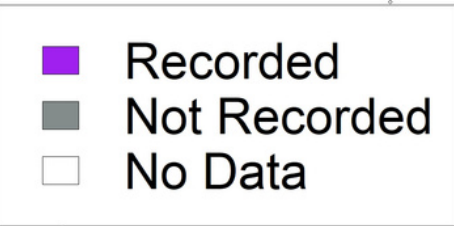
YANAM



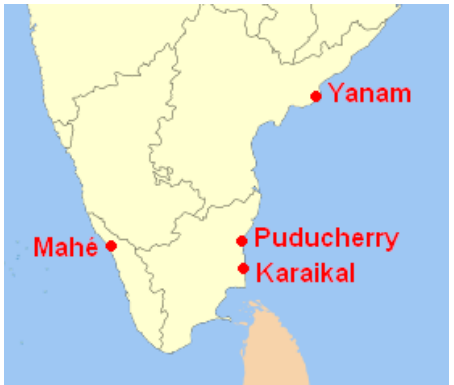
KARAIKAL



MAHE



Grid Size - 3.3 x 3.3 km



SUMMARY OF THE REPORT

House Sparrow *Passer domesticus* continues to be one of the most widely distributed species; the popular misconception that radiation from mobile towers is a reason for decline is yet to be proven with scientific evidence. Currently, their population is stable across India and there is no cause for immediate conservation actions. **Let us focus on species that are actually declining (including some of the common birds) and those in need of our instant attention & conservation measures.**

The district-level distribution of House Sparrow appears to be very uneven due to the lack of eBirders in some of the districts compared to others. So, there are plenty of data gaps to be filled in the eBird database. Thus, it is evident that our State requires more sampling and a lot of contribution to eBird by bird watchers and nature enthusiasts is really necessary.

You can start by watching birds from your home and you'll be amazed by the diversity around you! Later, you can document not just the House Sparrows but also all other wild birds and upload the information to eBird India. This will significantly help us to understand and map the distribution, abundance, density, population trends of the birds present in our region. All these scientific information are extremely crucial to the conservation of birds and their habitats.

In a few years time, we look forward to publish an updated report on the abundance and population trends of House Sparrow in Tamil Nadu and Puducherry. Until then, **we wish you all a Happy Birding and a Healthy Life ahead!**

This report comes under the Attribution-NonCommercial-NonDerivatives 4.0 International (CC-BY-NC-ND 4.0) license. Salem Ornithological Foundation has prepared this report to help people understand the distribution of House Sparrows in Tamil Nadu and Puducherry and to spread awareness about the importance of citizen science initiatives like eBird. We express our grateful thanks to the thousands of birders and eBirders for their contribution because of whom such a report was possible.

**LET US CONTRIBUTE TO CITIZEN SCIENCE INITIATIVES
AND HELP IN THE CONSERVATION OF BIRDS & NATURE!**

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Distribution Maps: Venkatesh S, Salem Ornithological Foundation.

Text and Report: Ganeshwar S V, Salem Ornithological Foundation.





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