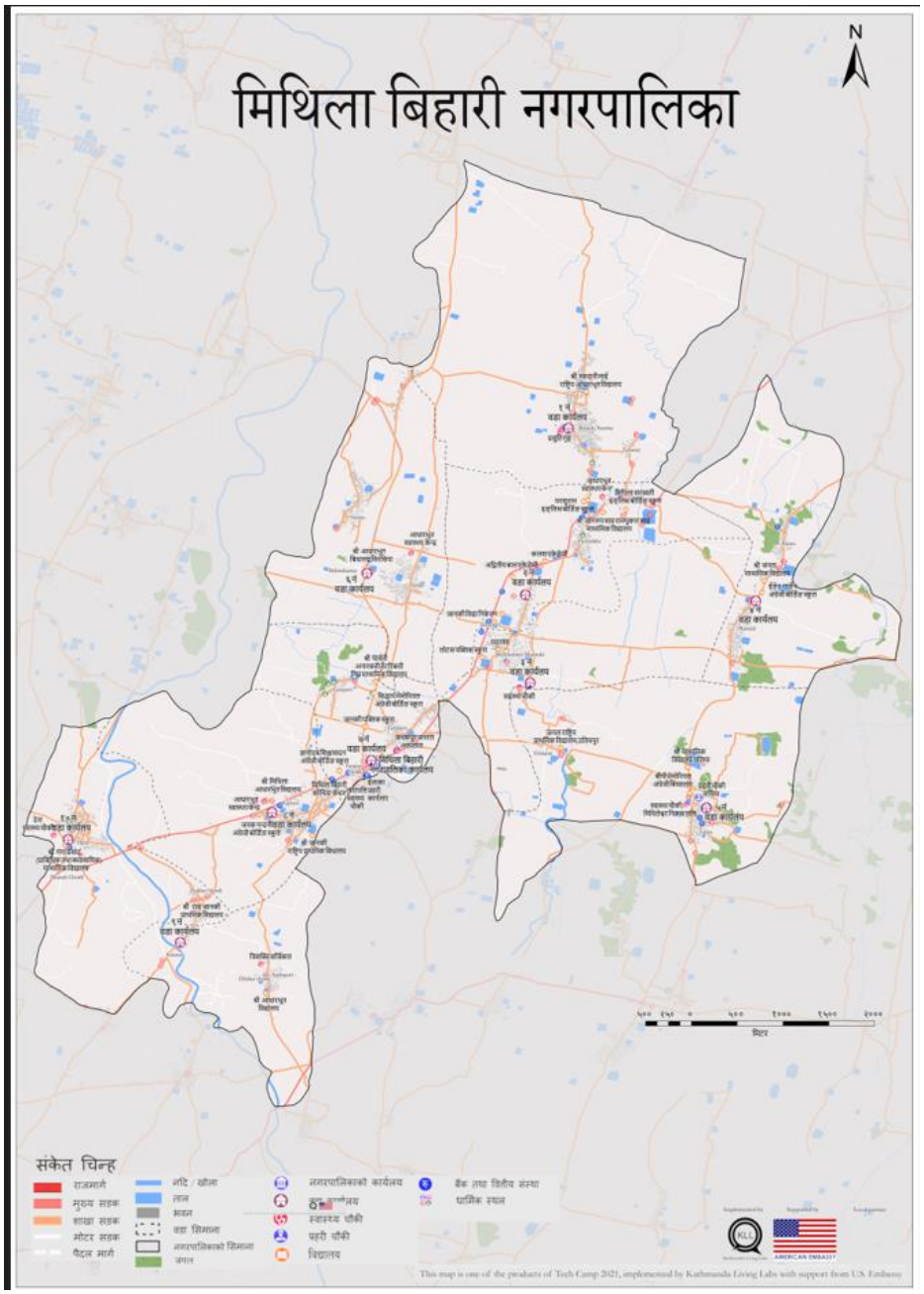
Success Case
Mithila Bihari Municipality, Dhanusha



Open Street Mapping work in Mithila Bihari Municipality - 2022

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Annex 10

Open Mapping for Sustainable Local Governance – Mithila Bihari Municipality 2022

1. Background:

Success of local governments in meeting development targets is crucial for the goals of federalism in Nepal. The local governments have a colossal opportunity to set the course of development based on people's aspirations, as citizens have increased power and responsibility to choose and act on their own agenda in the federal system. However, these governments face daunting challenges in human, capital, and other resource constraints. Innovative citizen-centric approaches are necessary to navigate these challenges to achieve the development goals. It is also imperative to note that properly achieving the development goals and measuring their progress is contingent on decision making and planning, driven by data.

Geospatial data is valuable to the local economy and community in various aspects. Alongside planning and decision-making for local governments, geospatial data can be used by businesses for economic value addition, academia for producing knowledge, and by other organizations for increasing the impact of their work. The openness of the information, or more specifically the freedom to access and use such open data, is crucial to achieving such multiplier effects of taxpayer-funded data generation processes.

This ethos of open data is reflected in the world's largest geospatial information database, OpenStreetMap (OSM). OSM (https://www.openstreetmap.org) is an open digital map created largely by the voluntary contributions of millions of people around the world. Mapping in OSM is carried out mostly by ordinary people using easily available technologies like smartphones and the internet. Although produced largely by amateurs, OSM has been used to inform disaster response and augment disaster resilience, aiding urban planning, providing location-based services, facilitating geography education, and more. Local governments in Nepal have used OSM to create city atlas, take stock of the city's assets, and support data collection efforts.

2. Current status of geospatial data systems at local levels in Nepal:

Data collection and storage efforts are slowly modernizing in Nepal. The shift from traditional paper-based surveys to digital (mobile-based) surveys has increased Nepal's capacity to collect huge amounts of data in a short time with available resources. Similarly, managing critical data such as land records management increasingly relies on digital surveys and digital data storage.

While this shift indicates improved readiness of a complete shift to the modern digital era, more efforts and resources are needed for data to have a significant impact on decision-making and development at local and all levels. The responsibilities of local governments have increased, but their capacity needs to increase too. Local governments also need to adopt innovative ways to make the most of the resources at hand to fulfill their promises to the people.

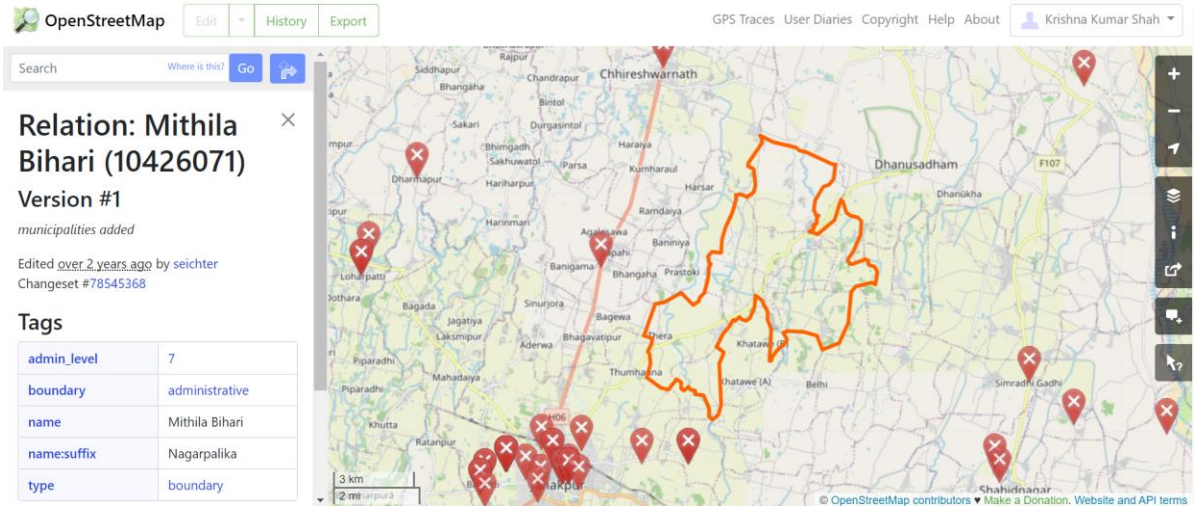
3. Activity done at Mithila Bihari Municipality:

Municipal governments face resource constraints to deliver ambitious development goals. To achieve the goals, data-driven decision-making and planning are crucial. Creating a geospatial information infrastructure is critical to such evidence-driven planning. Adopting emerging

innovations and capitalizing on the diffusion of web and mobile-based technology can help overcome resource constraints.

Mithila Bihari Municipality in association with Kathmandu Living Lab (KLL) utilized the world's largest geospatial information database, OpenStreetMap (OSM), as a tool to connect geospatial dimensions for better local level governance in Mithila Bihari Municipality. The activity was done through the mobilization of IT officers and other officers of the Mithila Bihari Municipality.

The entire work related to Open Street Mapping in this Mithila Bihari Municipality and all the wards under it was done by Kathmandu Living Labs for mapping work. The mapping has been for the legends: shops, ponds, hotels, factories, Government Offices, NGOs, Public toilets, Police station, Pharmacy, Petrol Pump, Hospitals, Banks, Money transfers etc. The mapping has been done in a period of 30 days using 11 officials from the muncipality and similar number of staffs from KLL.



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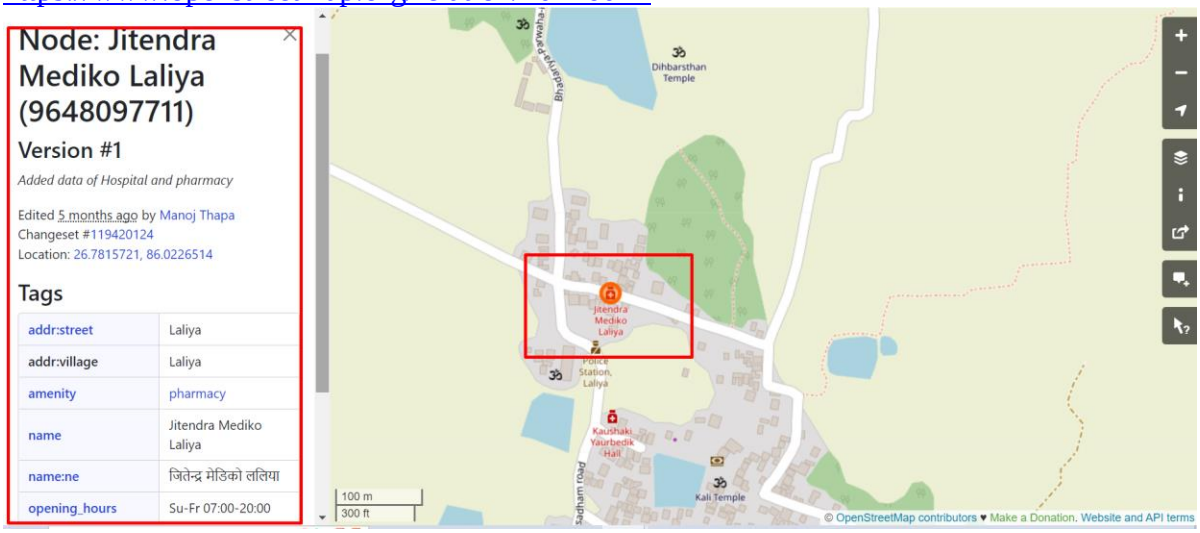
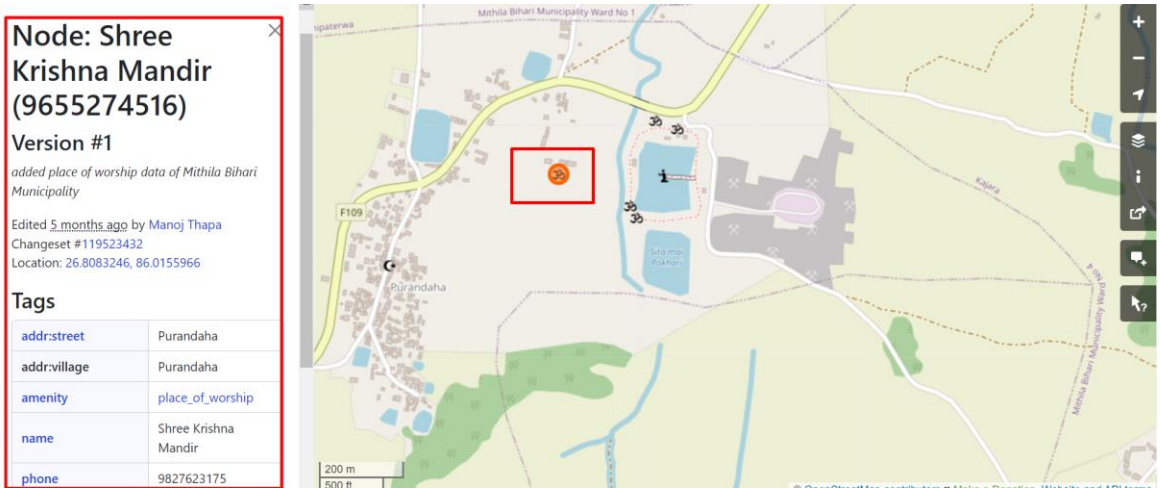
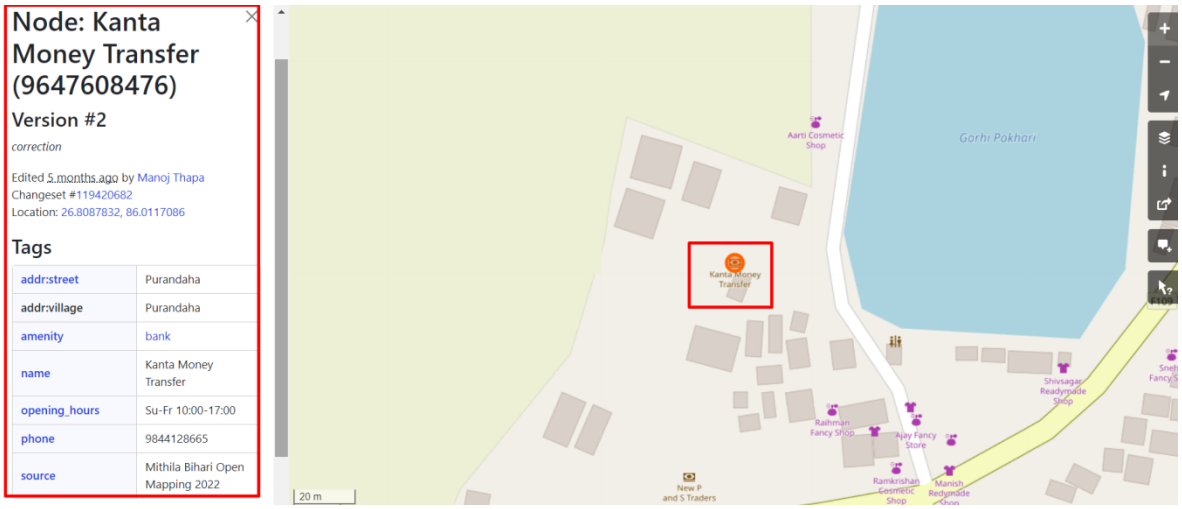


Jitendra Mediko, Laliya mapped in the OSM



Shree Krishna Mandir mapped in OSM



Kanta Money Transfer mapped in OSM

Aamna Fancy Store mapped in OSM

4. **Some Photos of the handover**

For sustainability of the mapping, training was provided to the officials for edit and addition of the landmarks in the OpenStreetMap (OSM). The detailed maps ward-wise is in the Annex.

5. Conclusion

The mapping of the Mithila Bihari Municipality in the OSM has been a pioneering work in the field of digital open source mapping in Madehsh Pradesh. The initiation done by the Mayor of Mithila Bihari Municpality, Mr. Rajendra Prasad Yadav with support from the Mr. Ramdarsh Yadav (Chief Administrative Officer), Mr. Lakshmi Narayan Yadav (Information Technology Officer) and Mr. Upendra Yadav (Jinci Branch Head) is really admirable. It is definitely a great privilege for the municipality to work with a great organization like Kathmandu Living Labs. The general public can now get information about the overall Digital Printed Map under this municipality.

Open Mapping movement in Nepal

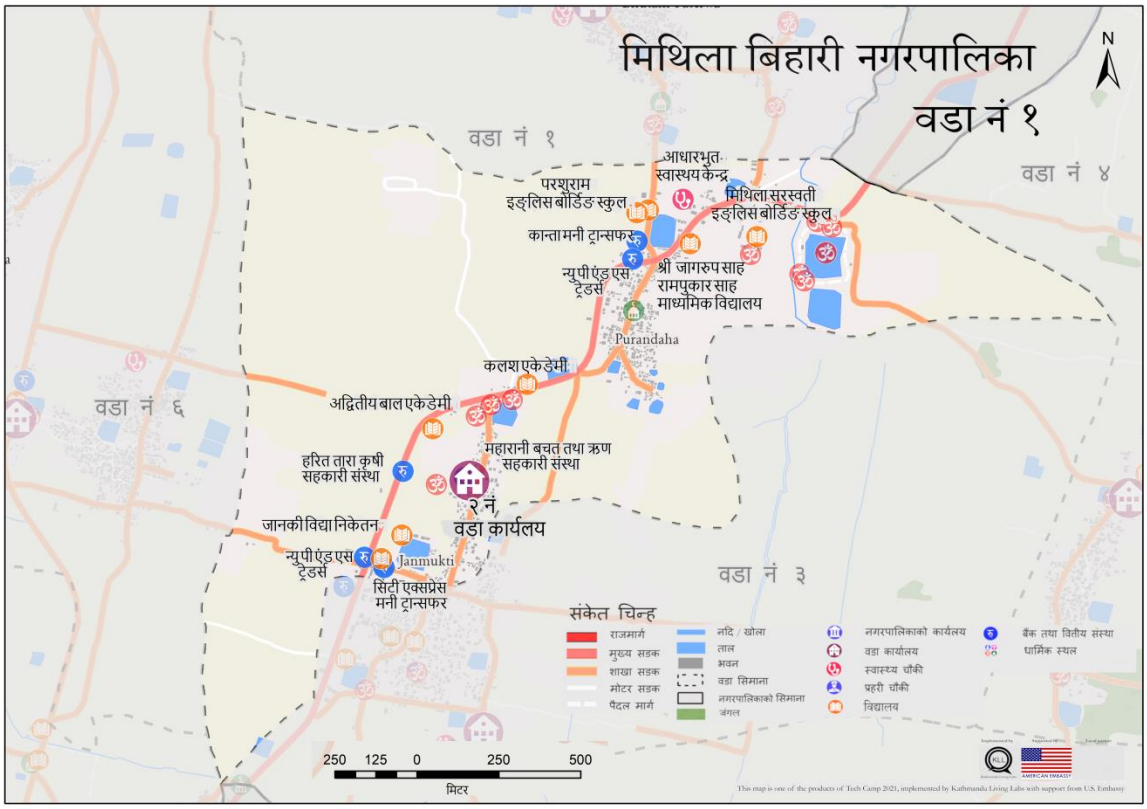
KLL is the pioneer of OSM mapping in Nepal. Over the last decade, we made significant contributions to creating OSM data throughout the country. Besides remote mapping, we have also worked extensively on the ground with local partners in Kaski, Dhading, Banke, Bardiya, Makwanpur, Saptari, Kailali, and most recently, Janakpur districts. KLL's two-year in-depth Secondary Cities project in Pokhara has created one of the most robust OSM maps in the developing world, one that is now being used by the Pokhara metropolitan government. Similarly, we have also mapped municipalities of Nilkantha, Dhading, and Sub-metropolitan of Nepalgunj, Banke extensively using OSM. In both places, we trained the local school and college students to map using OSM. In Kailali, KLL collaborated with Practical Action and International Institute for Applied Systems Analysis (IASA), and trained local citizens to map their communities and conduct annual Vulnerability Capacity Assessments. Further, this work has led to new maps being developed of flood-prone villages of the aboriginal Tharu communities of Lower Karnali River Basin. For all this grounded work, KLL has been awarded about a half dozen international awards, including the "Improving the Asia Award in 2017" by OpenStreetMap Foundation.

An example: The Map Book of Pokhara Metropolitan City

Pokhara Metropolitan City has published two editions of The Map Book, a paper atlas of Pokhara created using OpenStreetMap data. The Map Book was conceptualized as a part of Kathmandu Living Labs (KLL) Prepare Pokhara project wherein the municipality identified critical assets to be mapped and presented in the atlas. KLL recruited local students to collect data on assets such as hotels, hospitals, schools, fuel stations, water networks, etc. in the field to create the most comprehensive geospatial database of the metropolitan city yet. The data then became freely and openly available after being mapped in OSM and stored in Geonode, an open repository to store geospatial information. The atlas thus created can be used by municipalities, local institutions, and tourists to understand the location-based distribution of the city's critical assets and infrastructure. These use-cases help in urban planning, adding value to the economy and disseminating visual information publicly.

Image: Launch of The Map Book (Second Edition) by Pokhara Metropolitan City

Annex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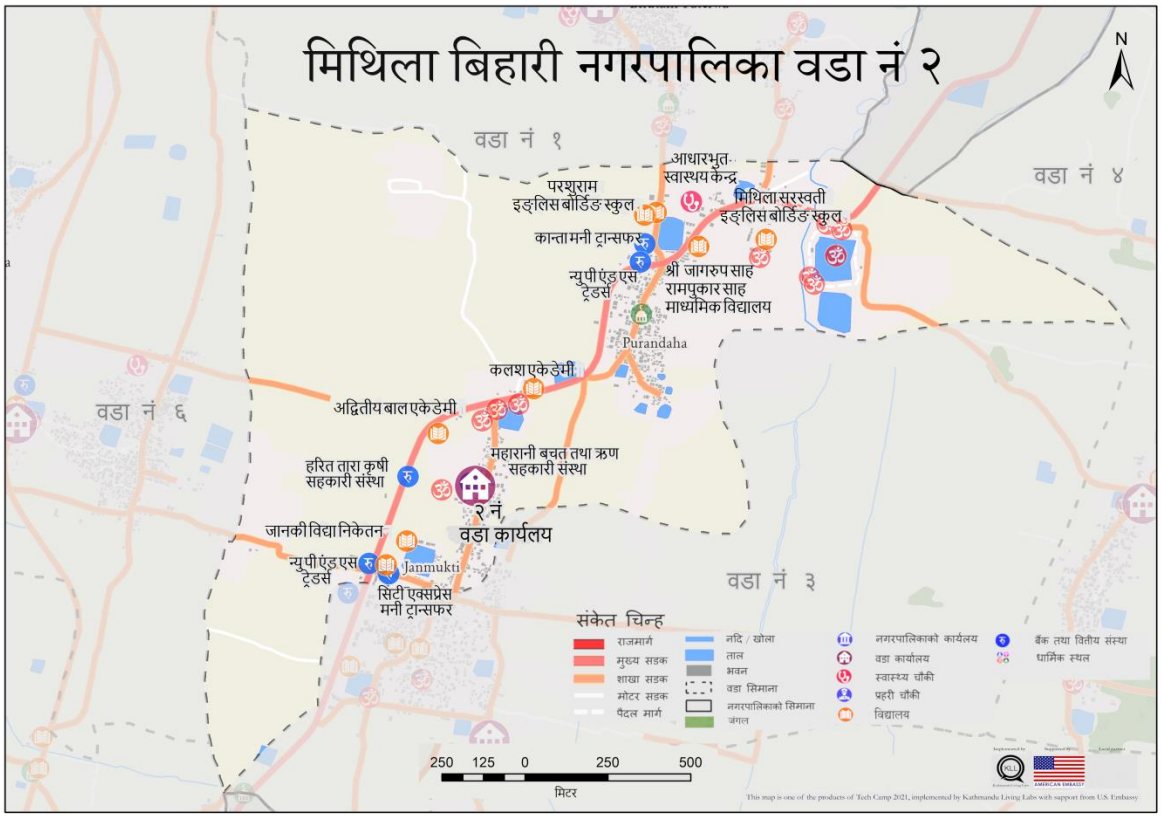
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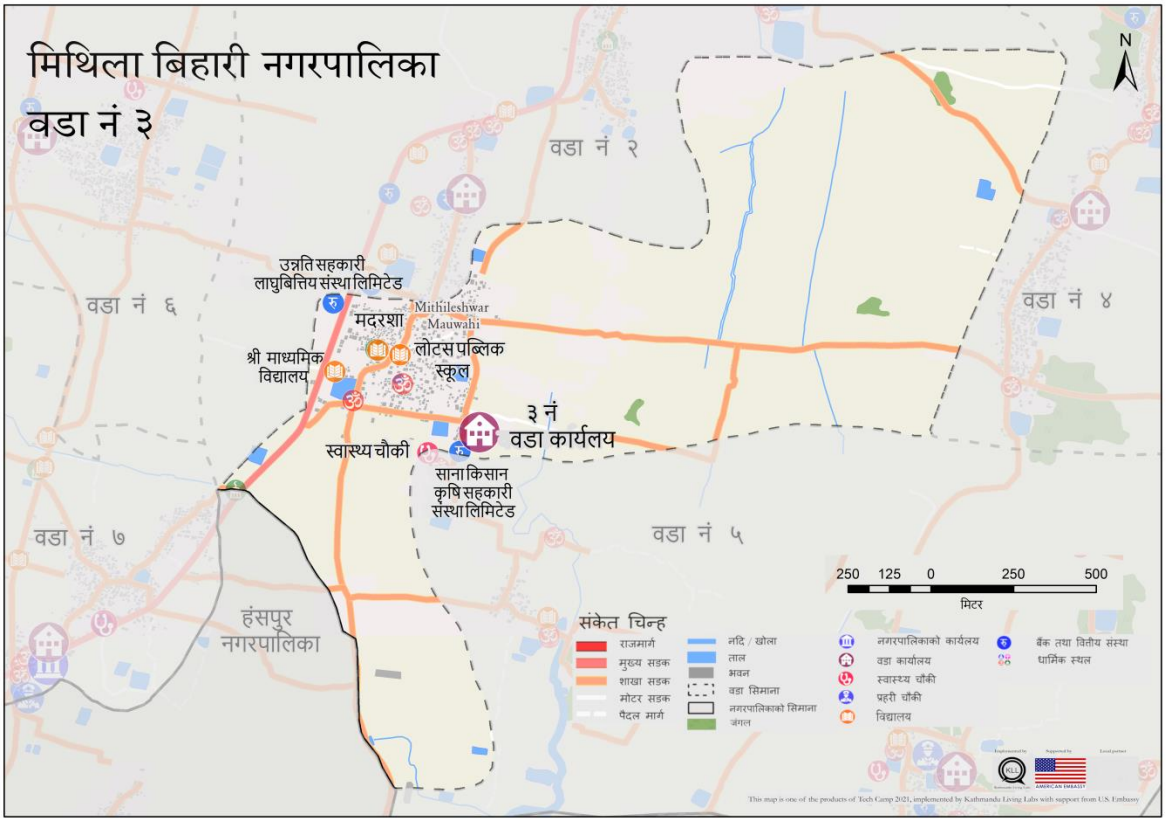
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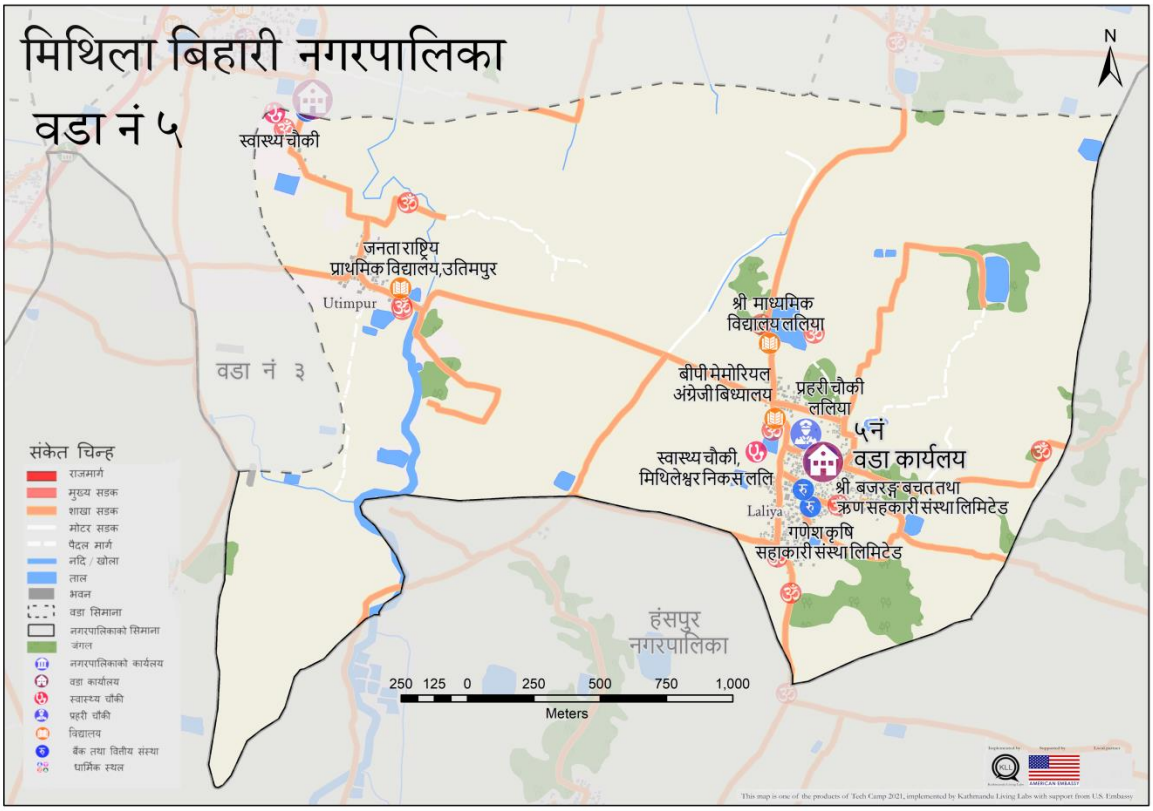
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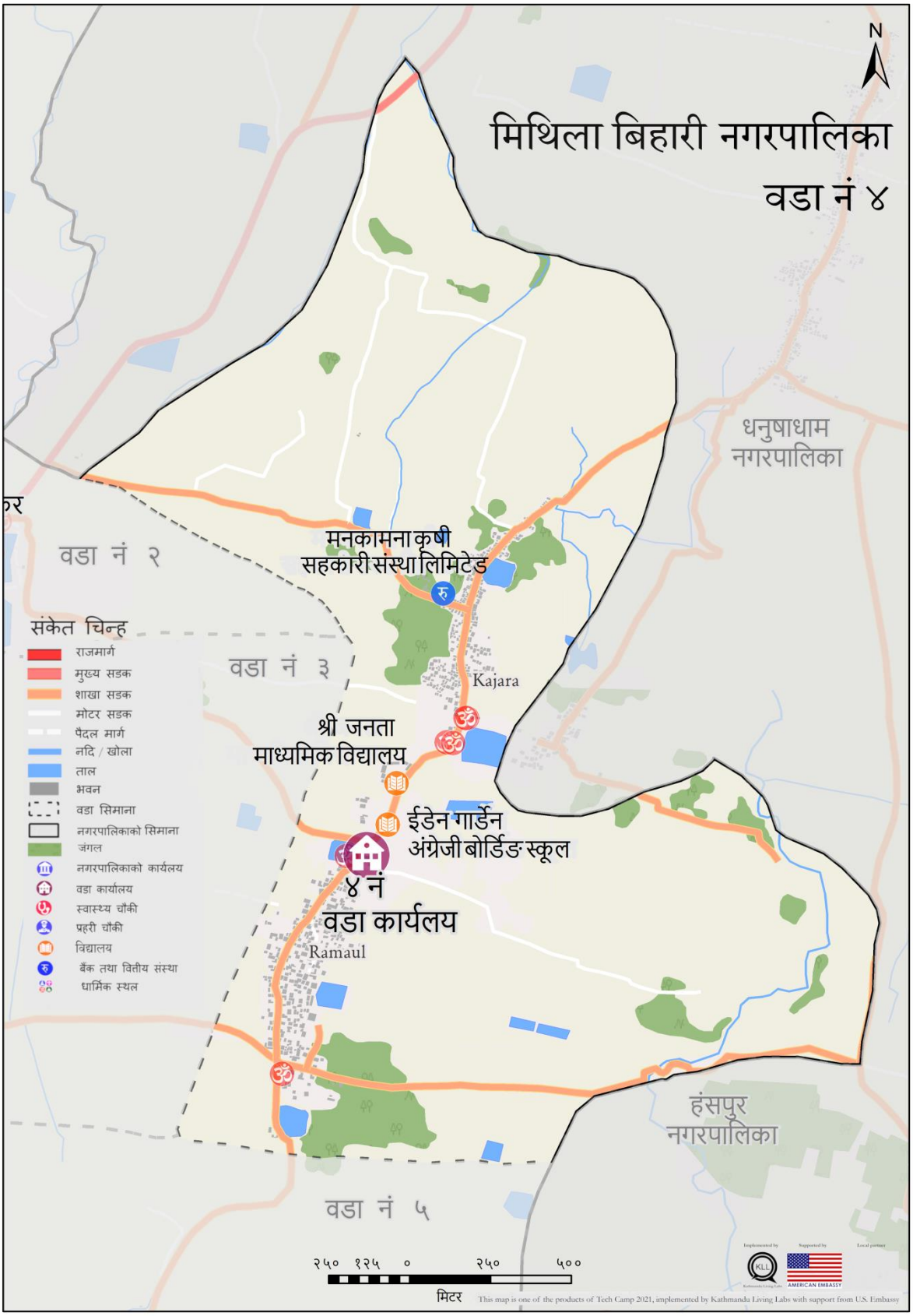
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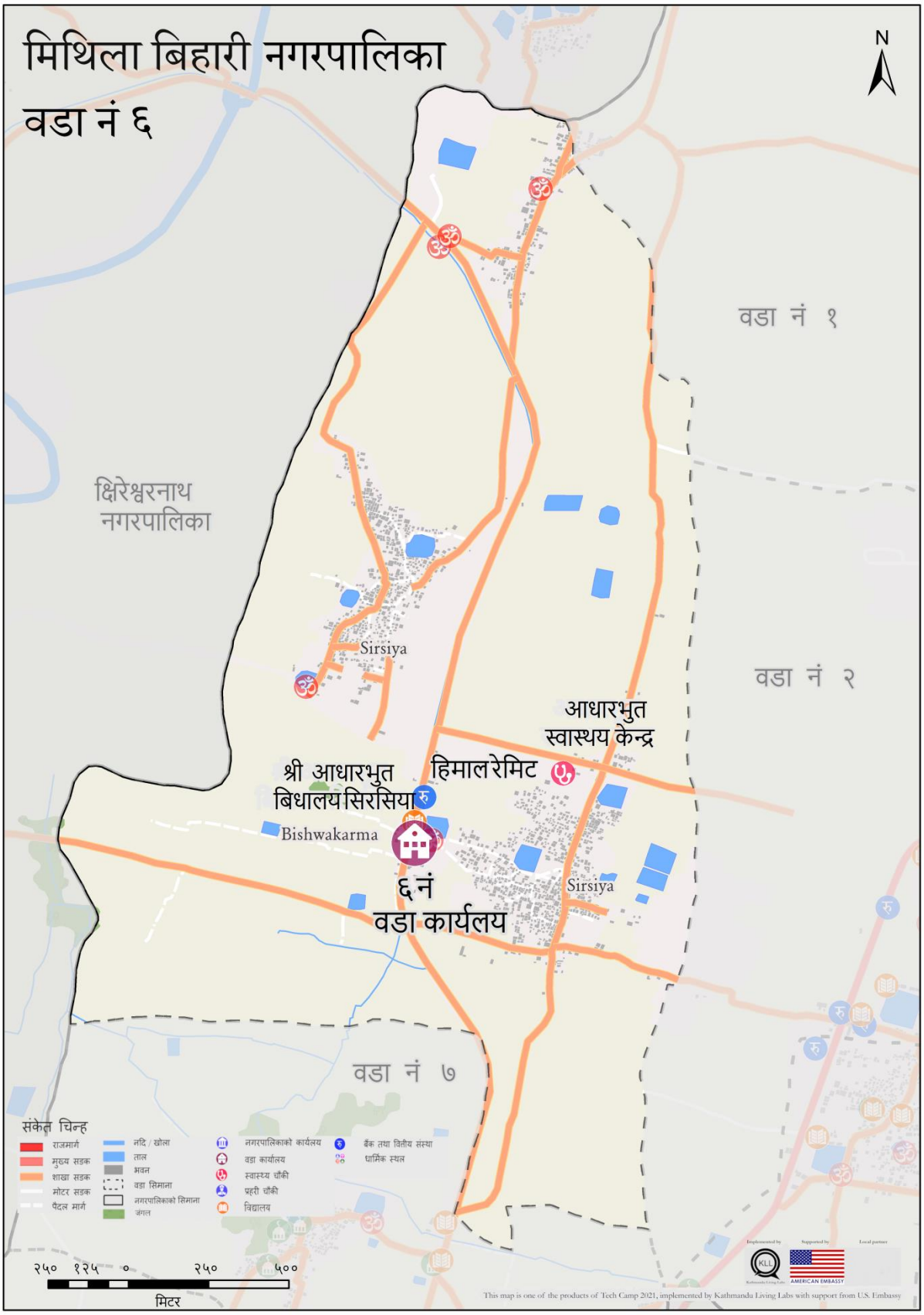
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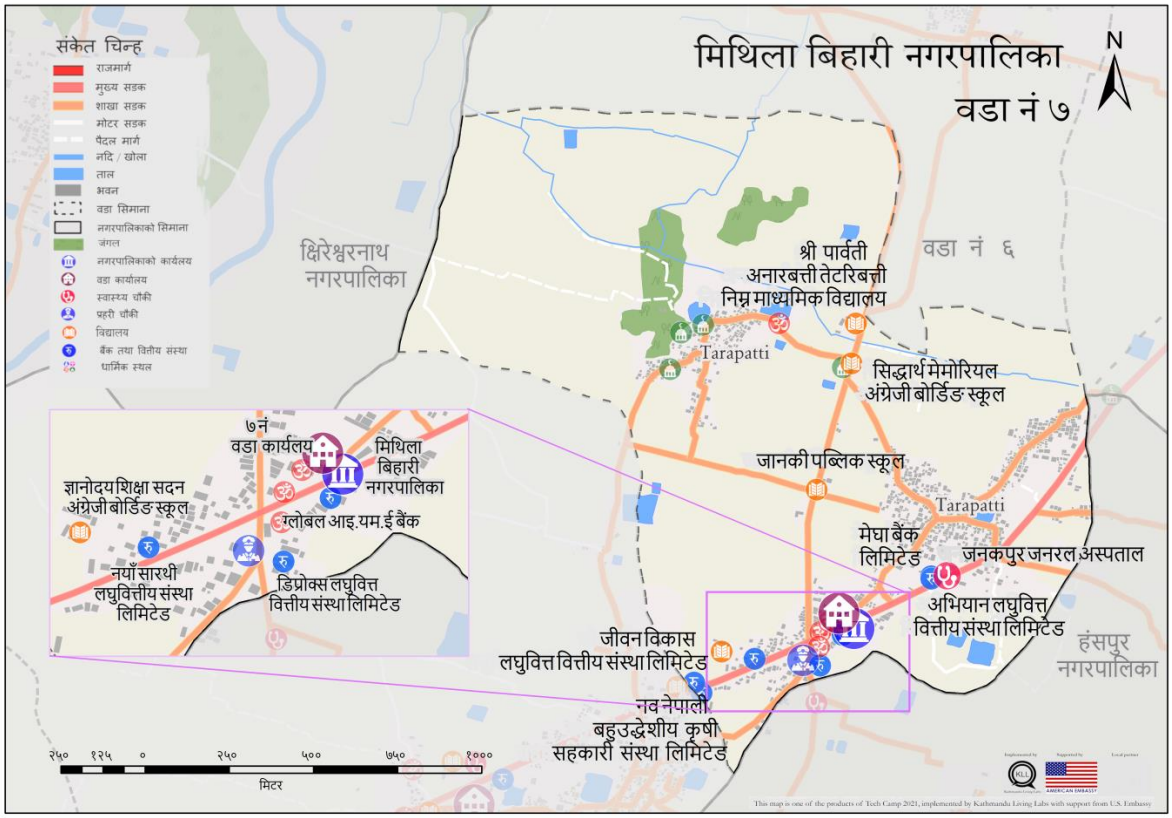
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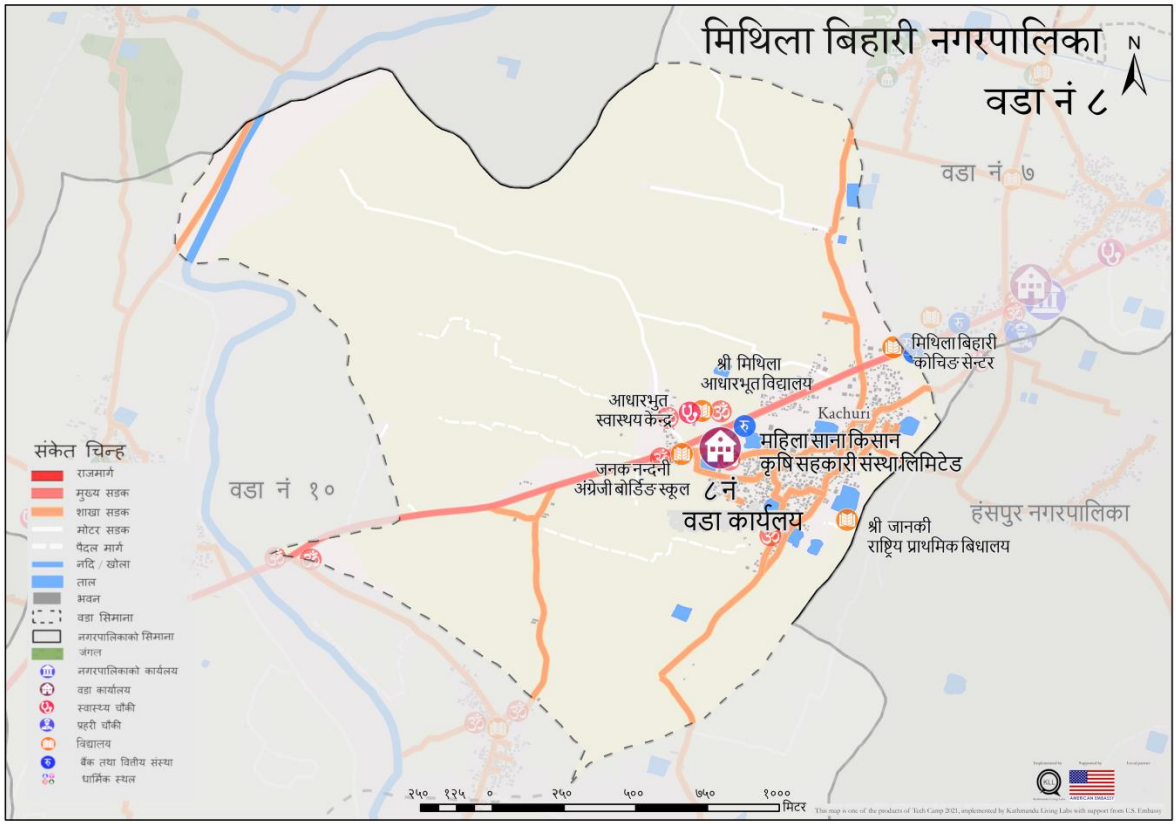
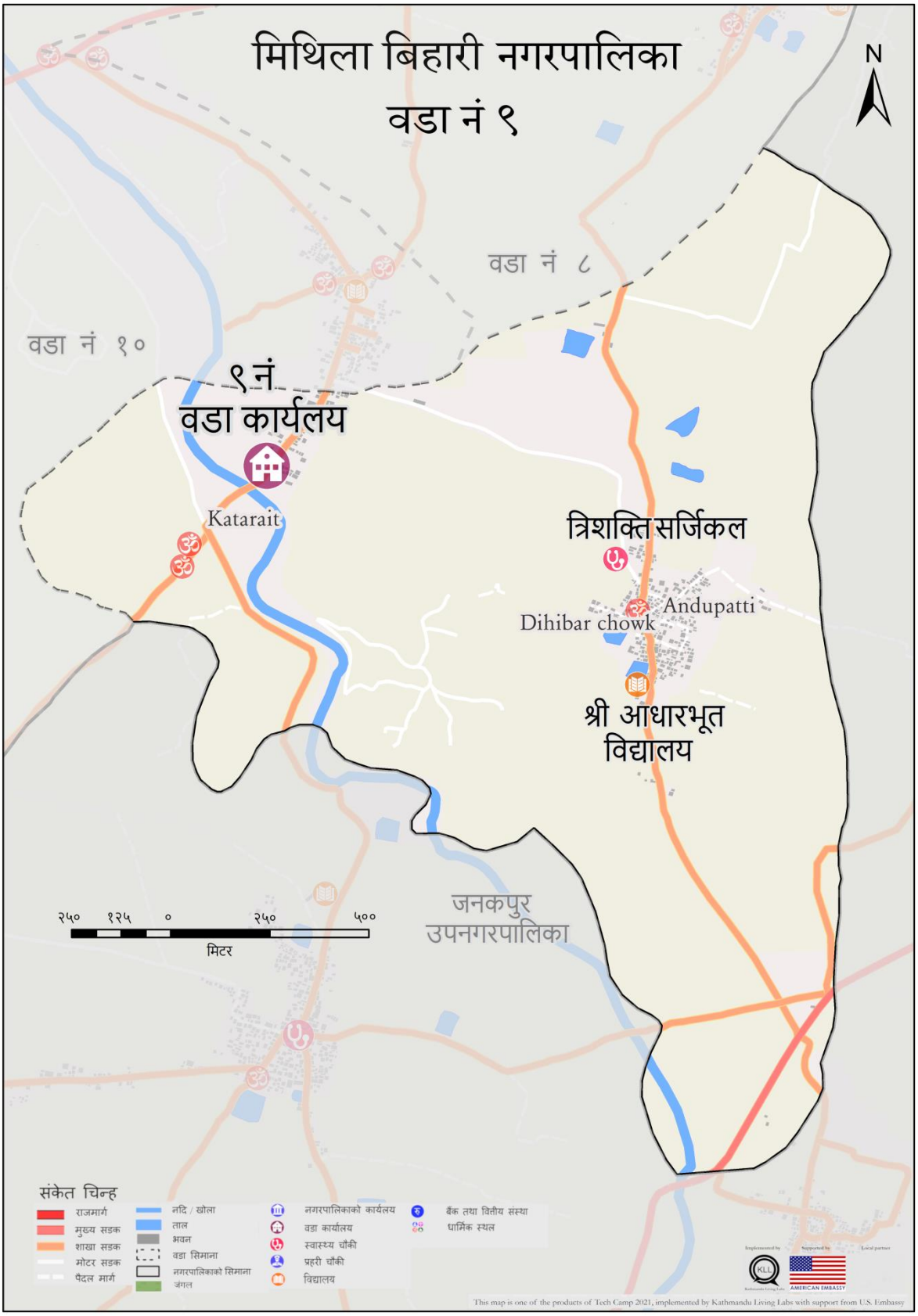

मिथिला बिहारी नगरपालिका
वडा नं ८
N
वडा नं ७
मिथिला बिहारी कोचिङ सेन्टर
श्री मिथिला आधारभूत विद्यालय
आधारभूत स्वास्थय केन्द्र
Kachuri
महिला साना किसान कृषि सहकारी संस्था लिमिटेड
जनक नन्दनी अंग्रेजी बोर्डिङ स्कूल
८ नं वडा कार्यालय
श्री जानकी राष्ट्रिय प्राथमिक बिधालय
हंसपुर नगरपालिका
वडा नं १०
संकेत चिन्ह
राजमार्ग
मुख्य सडक
शाखा सडक
मोटर सडक
पैदल मार्ग
नदि / खोला
ताल
भवन
वडा सिमाना
नगरपालिकाको सिमाना
जंगल
नगरपालिकाको कार्यालय
वडा कार्यालय
स्वास्थ्य चौकी
प्रहरी चौकी
विद्यालय
बैंक तथा वित्तीय संस्था
धार्मिक स्थल
२५० १२५ ० २५० ५०० ७५० १००० मिटर


मिथिला बिहारी नगरपालिका
वडा नं ९
N
वडा नं ८
वडा नं १०
९ नं
वडा कार्यलय
Katarait
त्रिशक्ति सर्जिकल
Dihibar chowk
Andupatti
श्री आधारभूत
विद्यालय
जनकपुर
उपनगरपालिका
२५० १२५ ० २५० ५००
मिटर
संकेत चिन्ह
राजमार्ग
मुख्य सडक
शाखा सडक
मोटर सडक
पैदल मार्ग
नदि / खोला
ताल
भवन
वडा सिमाना
नगरपालिकाको सिमाना
जंगल
नगरपालिकाको कार्यलय
वडा कार्यालय
स्वास्थ्य चौकी
प्रहरी चौकी
विद्यालय
बैंक तथा वितीय संस्था
धार्मिक स्थल
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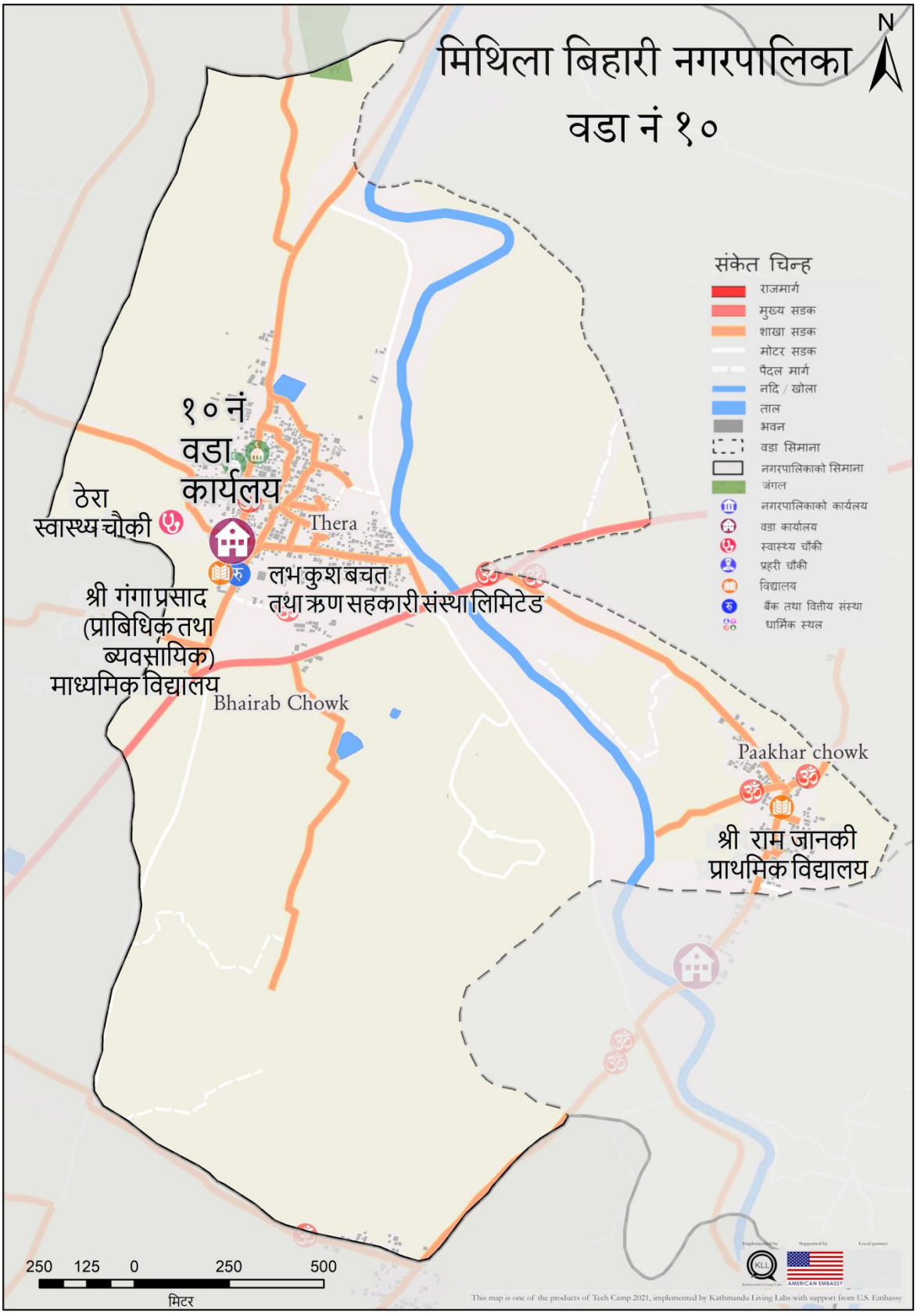
मिथिला बिहारी नगरपालिका
वडा नं १०
N
संकेत चिन्ह
राजमार्ग
मुख्य सडक
शाखा सडक
मोटर सडक
पैदल मार्ग
नदि / खोला
ताल
भवन
वडा सिमाना
नगरपालिकाको सिमाना
जंगल
नगरपालिकाको कार्यलय
वडा कार्यालय
स्वास्थ्य चौकी
प्रहरी चौकी
विद्यालय
बैंक तथा वितीय संस्था
धार्मिक स्थल
१० नं वडा कार्यलय
ठेरा स्वास्थ्य चौकी
Thera
लभकुश बचत तथा ऋण सहकारी संस्था लिमिटेड
श्री गंगा प्रसाद (प्राबिधिक तथा ब्यवसायिक) माध्यमिक विद्यालय
Bhairab Chowk
Paakhar chowk
श्री राम जानकी प्राथमिक विद्यालय
250 125 0 250 500
मिटर
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