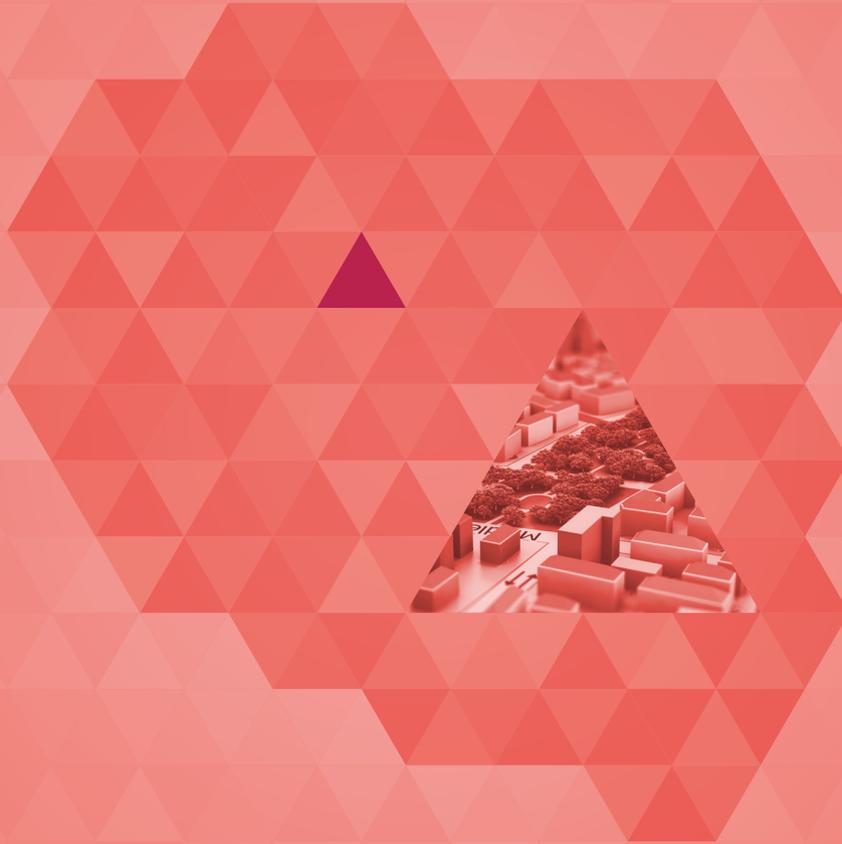


# POLAND CATCHING-UP REGIONS 3

SPATIAL PLANNING  
FOR THE WŁOCŁAWEK  
FUNCTIONAL URBAN AREA



Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized

# POLAND CATCHING-UP REGIONS 3

SPATIAL PLANNING  
FOR THE WŁOCŁAWEK  
FUNCTIONAL URBAN AREA



© 2019 International Bank for Reconstruction and Development / The World Bank

1818 H Street NW  
Washington DC 20433  
Telephone: 202-473-1000  
Internet: [www.worldbank.org](http://www.worldbank.org)

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

#### **Rights and Permissions**

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: [pubrights@worldbank.org](mailto:pubrights@worldbank.org).

# CONTENTS

Acknowledgements	5
Acronyms and Abbreviations	6
<b>Executive Summary</b>	<b>7</b>
<b>BACKGROUND</b>	<b>11</b>
Introduction	12
The context of the Włocławek Functional Urban Area (WFUA) and its spatial planning	13
<b>SCOPE OF WORK AND METHODOLOGY</b>	<b>19</b>
Spatial Analysis	21
Consultation and workshops with project stakeholders	22
Terms of reference (ToR) for the WFUA Concept of Spatial Development and the municipal studios	23
<b>KEY OUTPUTS AND FINDINGS</b>	<b>25</b>
Spatial analysis	26
Key takeaways on collaboration, capacity and institutional issues from consultations with the WFUA municipalities	46
<b>KEY RECOMMENDATIONS, CONCLUSIONS AND NEXT STEPS</b>	<b>49</b>
<b>ANNEX 1</b> Spatial Analysis Methodology	52
<b>ANNEX 5</b> Planning Capacity-Building Needs Survey Form for the Municipalities and Summary Responses	58
<b>ANNEX 5</b> Potential capacity building need estimates	62
<b>NOTES</b>	<b>64</b>

## FIGURES

<b>FIGURE 1</b>	Population changes of local municipalities in WFUA	14
<b>FIGURE 2</b>	WFUA major road network and water features	15
<b>FIGURE 3</b>	Land use layer on Infostrada, highlighting WFUA	15
<b>FIGURE 4</b>	Coverage of spatial plans in the WFUA	16
<b>FIGURE 5</b>	Land development restrictions in WFUA	28
<b>FIGURE 6</b>	Development suitability analysis of WFUA	30
<b>FIGURE 7</b>	Development suitability and land development restriction analyses of WFUA	32
<b>FIGURE 8</b>	WFUA's strategic development areas (as indicated by municipalities)	34
<b>FIGURE 9</b>	Provision and coverage of basic public facilities in WFUA	38
<b>FIGURE 10</b>	Provision and coverage of basic medical centers in WFUA	40
<b>FIGURE 11</b>	Provision and coverage of kindergartens in WFUA	42
<b>FIGURE 12</b>	Provision and coverage of primary schools in WFUA	44

## TABLES

<b>TABLE 1</b>	Status of studiums in the WFUA	16
<b>TABLE 2</b>	Percentage of local plan coverage in Municipalities	17
<b>TABLE 3</b>	Key activities and outputs of the spatial planning component	20
<b>TABLE 4</b>	Key factors in determining and prioritizing strategic development areas	36
<b>TABLE 5</b>	Service gap of essential public facilities by municipalities	37
<b>TABLE 6</b>	Key recommendations	50

# ACKNOWLEDGEMENTS

To develop this report, a World Bank Group team conducted multiple missions, field visits, and workshops in the Slovak Republic, during which it collaborated with Slovak experts. Guidance in the process was effectively provided by Paul Kriss (World Bank Lead Urban Specialist).

The team is indebted to the executive and administrative staff of the Prešov Self- Governing Region that generously offered its premises, support staff and endless hours of dynamic and dedicated discussions in meetings. In this context, the World Bank Group team is particularly thankful to Dr. Rudolf Bauer and Ms. Maria Bi ová.

Last, but not least, special thanks go to all the Slovak and international experts who have directly contributed their expertise in shaping the following report and analytical findings. The report collates contributions from Scott Wayne (World Bank consultant), Prof. Ludmila Novacka (University of Economics in Bratislava, World Bank consultant), Dr. Jordanka Tomkova (World Bank consultant), Mr. Vladimir Benc (World Bank consultant), and Dr. Guido Licciardi (World Bank Senior Urban Development Specialist).

A draft version of this report was issued in April 2019 to the EC and PSK. Their comments were then addressed and incorporated as much as possible, and a revised version of this report was issued in May 2019.

The findings, interpretations, and conclusions expressed herein are those of the authors and do not necessarily reflect the view of the World Bank Group, its Board of Directors, or the governments they represent.

# ACRONYMS AND ABBREVIATIONS

- CuR** Catching-up Regions
- EC** European Commission
- GIS** Geographic Information System
- ITIs** Integrated Territorial Investments
- KPMO** Kujawsko-Pomorskie Marshal Office
- MO** Marshal Office
- MoID** Ministry of Investment and Development
- OSI** Obszar Strategicznej Interwencji (or area of strategic intervention)
- OSRP** Office for Spatial and Regional Planning
- TOR** Terms of Reference
- WFUA** Włocławek Functional Urban Area

# EXECUTIVE SUMMARY

The European Commission (EC) launched the Catching-up Regions (CUR) Initiative in April 2016, which offered tailored technical support to selected regions in Poland provided by the World Bank. Under the third round of the CUR (CUR3), the Kujawsko-Pomorskie Marshal Office (KPMO) identified the lack of integrated spatial planning for the Włocławek Functional Urban Area (WFUA) as a developmental bottleneck affecting the competitiveness of the whole region. This report summarizes the process, approach, key outputs, findings and recommendations from the World Bank technical assistance to the KPMO and the municipalities within the WFUA, under the spatial planning component of the CUR3. The design of the component adopted a similar approach, scaling up from the successful CUR2 activity for the Rzeszów Functional Urban Area in the Podkarpackie Region, and customized to the specific circumstance of the WFUA.

The main objective of the engagement is to assist the Włocławek Urban Functional Area towards formulating a common Concept for Spatial Development which will determine the future planning activities and development direction of the eight municipalities forming the WFUA. The WB team supported the local authorities in initiating joint spatial planning for the WFUA with a view to improving its development opportunities and enhancing the quality of life.

Over the course of a year, the Bank team engaged local stakeholders through a series of consultations to better understand their development conditions and the local context, sought out their specific capacity-building needs around spatial planning, as well as encouraged their interests to work together toward a common development vision for the WFUA. Building on the knowledge, experience and available tools of the local stakeholders, the Bank team also conducted a spatial analysis to assist with identifying both constraints and opportunities for development in the WFUA that will inform the eventual formulation of a Concept of Spatial Development for the WFUA.

More specifically, the scope of the technical assistance offered by the Bank encompassed four main areas:

- i) A series of spatial analyses as input to a WFUA Concept of Spatial Development (including development restrictions, development suitability, public facilities and amenities - provision and gaps - and identification of strategic development areas)
- ii) Participatory consultations and workshops with local stakeholders as a key process
- iii) Exemplary terms of reference for a WFUA Concept of Spatial Development and municipal 'studiums'<sup>1</sup>
- iv) Additional capacity building support and institutional-strengthening efforts

Some key findings and takeaways from the engagement include:

- A large proportion of land (more than 80%) in the WFUA encounters some development restrictions. These include areas with flood risk (1 in 100-years flood zone), natural protection areas, forested areas, and arable land. Some of these constraints do not imply prohibition of all development, but certain conditions of development or the compatibility of land uses proposed would have to be considered.
- ‘De-farming’ of high-quality arable land on rural areas (top soil quality class I-III) is a major development concern for most municipalities given the large areas (around 34% of the total land area) in the WFUA that are classified as such. Many parcels suitable for development, such as in the southern and western parts of the WFUA, are currently unable to be developed due to this restriction. While good quality arable land should indeed be protected for the sake of food production as well as the longer-term sustainability and self-sufficiency of the country, inflexible protection of such plots should be reassessed.
- The center of Włocławek city is developed to a large extent. The spatial analyses suggest that areas suitable for development are mostly located on its outskirts or in neighboring municipalities, such as the municipalities of Fabianki, Włocławek, Kowal, Choceń, Luban and Brześć Kujawski.
- While there are some areas suitable for development that already have local spatial plans prepared, most municipalities have not developed spatial plans for areas which could be suitable for development. Local municipalities have the legal mandate for preparing local spatial plans and these are the only legally-binding planning documents. Hence, municipalities are encouraged to scale-up the elaboration of their local spatial plans especially for identified strategic areas.
- Through an interactive and qualitative process, each municipality was guided to consider various factors to identify and prioritize strategic areas of development within their jurisdiction. The primary function (economic, residential or tourism) of such strategic areas were also discussed. The municipalities appreciated understanding what each other’s strategic development areas are, and how these areas might be synergized within the WFUA. However, further deliberations and diagnostics on the selection of the WFUA’s strategic areas are still needed.
- The provision of essential public facilities (medical center, kindergartens and primary schools) were examined. Such services were generally found to be adequate. However, large disparities exist across the municipalities, with Włocławek City and Kowal City having the best coverage of services. Such an analysis of public facilities provision can be used to provide information to each municipality to help them shape their decision for opening, closing, relocating, or consolidating public services, according to the needs and location of the population.
- WFUA municipalities acknowledge that collaboration on various aspects related to spatial planning could be improved. While currently, there is an absence of regular dialogues, or a formal platform or modality for spatial planning collaboration amongst the WFUA municipalities, the stakeholders agreed that existing set-ups could be leveraged, such as the Steering Committee for the Włocławek Area of Strategic Intervention, or new arrangements could be explored and developed.
- Overall urban planning capacity is low among the WFUA municipalities especially in the smaller ones. Training or upskilling would contribute toward more effective urban development, planning and management. Local authorities also welcomed the idea of a common or shared technical support unit.

The advisory support provided by the World Bank aims at empowering stakeholders to take decisions on the design and implementation of solutions to address the developmental bottlenecks identified. While the Bank team takes the lead on proposing different methodologies, conducting option analyses, and highlighting the pros and cons of given solutions based on experience from other places, the ultimate decision-making, and realization of solutions on the ground still resides with the Polish stakeholders. It is the wish of the team that the analyses, support, and findings provided through this engagement will supplement useful material and tools that will assist the KPMO, and the municipalities of the WFUA toward better spatial planning and development of the WFUA.

**BACKGROUND**

## INTRODUCTION

**The European Commission (EC) launched the Catching-up Regions (CUR) initiative in April 2016, which offered tailored technical support to selected regions in Poland, provided by the World Bank.** The Ministry of Investment and Development (MOiD) coordinates the CUR Initiative from the Polish side. With the completion of the first two phases of the initiative, in the third CUR (CUR3) edition, regions could apply for technical assistance provided by the World Bank in an open competition. The CUR3 Initiative lasts around one year, from July 2018 to June 2019.

**The Kujawsko-Pomorskie Marshal's Office (KPMO) identified the lack of integrated spatial planning for the Włocławek Functional Urban Area (WFUA) as a developmental bottleneck affecting the competitiveness of the whole region.** "Further sustainable development of the WFUA requires consistent and well thought-out planning of development processes in such a way as to reconcile the interests of a large city with rural Gminas and a small town (Kowal City), particularly rational space planning due to the need to introduce new elements (business infrastructure) and extension of existing ones (transport infrastructure in the communication network with the A1 motorway, residential, recreational, service and other areas)." This request for assistance thus formed the impetus for the spatial planning component under CUR3.

**Currently, Polish law does not strongly regulate spatial planning at the functional urban area level and the idea of planning or operating as a functional urban area is not deeply rooted.** The WFUA consists of eight municipalities<sup>2</sup>, each with a different set of priorities and challenges. Traditionally, each local government unit focuses only on tasks within their jurisdiction and cooperation beyond borders is not apparent in its functions. Legislatively, municipal authorities are responsible for creating "studiums of spatial development" and local spatial plans<sup>3</sup>, while regional plans provide a planning structure at the regional level, they tend to be broad-stroked and ineffective for coordination at the local level. Hence there appears to be a regulatory gap at the functional urban area (FUA) level that should be filled by the self-initiated efforts of the local authorities.

**The current spatial planning policies and practices result in sub-optimal and unsustainable urban development.** Since studiums are not legally binding and are often outdated, their provisions are frequently overridden by individual administrative decisions on the terms of development for a given plot (in Polish, this is "warunki zabudowy"). Many of the new developments in Poland occur through such ad-hoc individual development decisions which do not take guidance from any higher-level or coherent planning system, may not align with any urban development vision, or may even cause contradiction or disruption to more coordinated efforts. As for spatial plans, they are usually prepared only for very small areas (a single plot or several plots). Urban territories are often peppered with several small and disconnected spatial plans that do not support a broader or joint vision, and hence prove insufficient as a city management tool in its current form. This problem is well known in Poland and will require national-level actions to update or reform the planning system and its associated laws.

**The key objective of this component is to assist the Włocławek Functional Urban Area toward formulating a common Concept for Spatial Development<sup>4</sup> which will determine future planning activities (for example, studies of conditions and directions for spatial development and local spatial development plans) and the development direction of the municipalities forming the WFUA.** The WB team supported the local authorities in initiating joint spatial planning

for the WFUA with a view of enhancing its development opportunities and quality of life. Over the course of a year, the Bank team engaged the local stakeholders through a series of consultations to better understand their development conditions and the local context, sought out their specific capacity-building needs in spatial planning, as well as encouraged their interests to work together toward a common development vision for the WFUA. Building on the knowledge, experience and available tools of the local stakeholders, the Bank team also conducted spatial analyses to assist with identifying both the constraints to, and opportunities for development in the WFUA, to inform the eventual formulation of a Concept of Spatial Development for the WFUA. The design of the component adopted a similar approach, scaling up from the successful CUR2 activity for the Rzeszów Functional Urban Area in the Podkarpackie Region, and then customizing it to the specific circumstances of the WFUA.

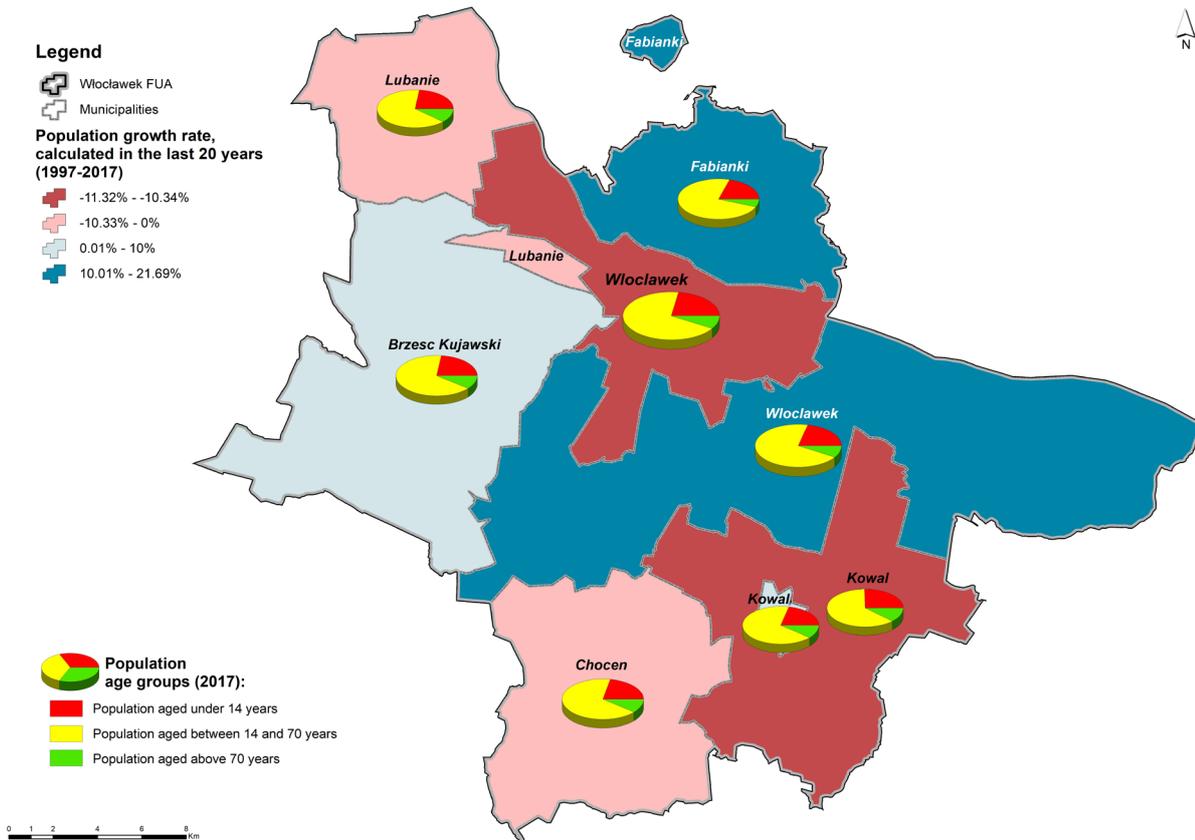
**Through this engagement, the WB team provides advice, expertise and analytical support, while the key decisions are still being taken and the way forward is being paved by the local stakeholders.** The advisory support provided by the World Bank aims at empowering the stakeholders to take decisions on the design and implementation of solutions to address the developmental bottlenecks they identified. While the Bank team takes the lead on proposing different solutions, conducting option analyses, and highlighting the pros and cons of given solutions based on experience from other places, the ultimate decision-making and the realization of solutions on the ground still resides with the Polish stakeholders.

## THE CONTEXT OF THE WŁOCŁAWEK FUNCTIONAL URBAN AREA (WFUA) AND ITS SPATIAL PLANNING

**The WFUA is in Kujawsko-Pomorskie ‘Voivodeship’<sup>5</sup> of central Poland, covering 820 square kilometers, with a population of around 160,000.** The Włocławek City, situated at the core of the WFUA, has a population of around 110,000 citizens. It is experiencing an overall decrease in population since 1997 (similarly for Kowal municipality and to a lesser extent, for Lubanie and Chocen municipalities). Włocławek City plays a leading role in the WFUA, serving as its cultural and business service center. It is also the region’s third largest city, after the two regional capitals — Toruń (202,000) and Bydgoszcz (353,000). The WFUA makes up less than five percent of the Kujawsko-Pomorskie Region’s territory (almost 18 thousand square kilometers) and is home to seven percent of its population (the region’s population is almost 2.1 million). In the hierarchy of urban system for the region, the WFUA is an important center and has an important catalyst role to activate one of the lowest developed area (the south-eastern part of the region). However, currently, it has not served this role to its full potential and support, such as on spatial planning, is required to enable this.

**The WFUA is well connected to the regional road network, equipped with generally good infrastructure and facilities for businesses but has assets with unrealized potential.** The A1 highway (north-south) cuts across the WFUA territory (Figure 2), while the A2 highway (east-west) is about one hundred kilometers away from the WFUA to its south. Włocławek City has a well-functioning special economic zone with several large enterprises located there. The Brześć Kujawski municipality also has a business area that is focused on attracting investors. Poland’s main river, the Vistula, flows through the WFUA, though due to its shallow waters, it is not navigable for freight ships. The dam located in Włocławek City creates a large water reservoir that seems to have tourism potential, though it is currently underused. Włocławek City hosts one of the regional hospitals and several cultural institutions. While there is no university in the WFUA, there are two vocational education schools in Włocławek and secondary education facilities in other WFUA municipalities.

**FIGURE 1** Population changes of local municipalities in WFUA



Source: Authors' analysis

**The Kujawsko-Pomorskie Region has a valid regional spatial plan (approved in 2003<sup>6</sup>) and a digital spatial data system known as the Infostrada.** The regional spatial plan plays a coordinating role between the national and local spatial planning. It describes the regional development strategies, provides guidelines for local land-use plans, and determines restricted areas (for example military bases), flood-prone areas and mining areas at the regional level. The Infostrada is a geo-portal created by the KPMO and supported by the European Commission. It is an admirable initiative toward digitizing and sharing spatial data. It contains a good number of spatial datasets for the region, including addresses, building characteristics and use, land use, coverage of local spatial plans, transport infrastructure, and so on. However, not every dataset has full regional coverage; for example, land use information is not available for the WFUA (see Figure 3). While the Infostrada is open for the use of all municipalities, during the interviews, the WFUA municipalities admitted that they only took limited advantage of the Infostrada resources. This is partially due to the limitations of the local capacity, as well as compatibility issues between the local spatial planning formats and that of the Infostrada.

**All the WFUA municipalities have studiums, although some are outdated. Some municipalities have relatively new studiums, while others have outdated documents from the early 2000s (see Table 1).** Most municipalities use paper-based studiums and the documents are prepared using different methodologies. Some municipalities are in the process of updating their studium and some are planning to do so soon. Hence, this is an opportune time to prepare the WFUA Concept of Spatial Development, to coordinate cross-border issues and priorities that would then be elaborated in the local studiums.

**The coverage of spatial plans varies significantly in the WFUA.** Some municipalities have substantially better coverage of the spatial plans (for example, Włocławek City), some have prepared plans for selected strategic areas such as economic or industrial zones that are in proximity



**TABLE 1** Status of studiums in the WFUA

Municipality	Year of studium creation and status
Włocławek	2000 (in need of updating)
Włocławek City	2011 (currently being updated)
Brześć Kujawski	2009
Chocień	2012
Fabianki	2000 (currently being updated)
Kowal	2000 (in need of updating)
Kowal City	2002 (in need of updating)
Lubanie	2006 (currently being updated)

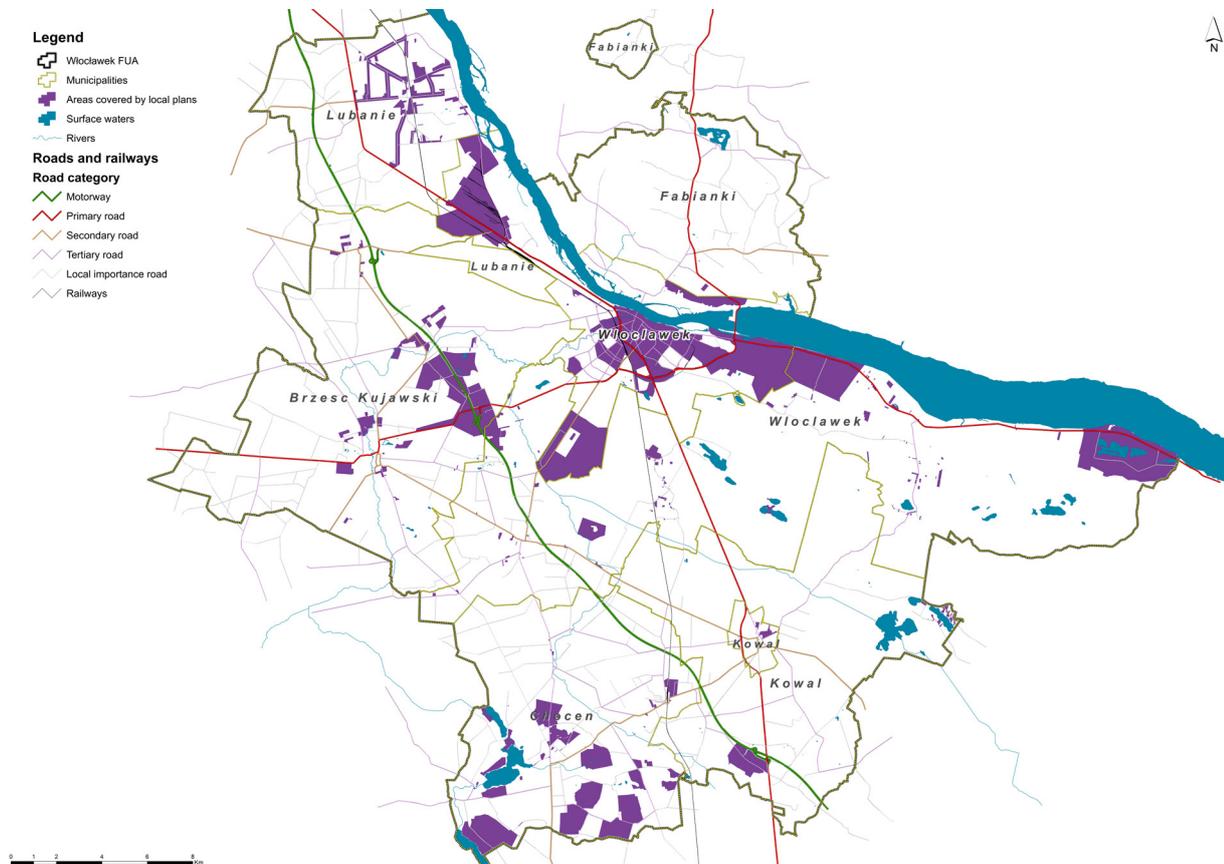
Source: interviews with municipalities

to main roads (Lubanie and Brześć Kujawski), while others have very limited coverage (see Table 2 and Figure 4). The format of these spatial plans also differs, from paper-based to digital, with the smaller municipalities using mostly paper-based formats only.

**The number of personnel working on spatial planning also significantly differs amongst the WFUA municipalities.** The most acute capacity shortages are witnessed in the smallest municipalities. While Włocławek City has an office devoted to spatial planning with multiple staff, the rest of the municipalities typically have one person responsible for spatial planning (who

is sometimes in charge of other functions simultaneously). Much of the hardware or equipment for digital spatial planning are also lacking in the smaller municipalities (for example, computers are not equipped with dedicated spatial planning or geographic information system (GIS) software). Such conditions are not conducive to enhancing the expertise and capacity of the planner, nor to developing his/her ability to use information technology (IT) solutions. Even though studiums and spatial plans are typically prepared by external companies, the lack of sufficient urban planning professionals and technical skills at the municipal level poses challenges to the effective management of even day-to-day planning needs, not to mention forward-looking and strategic spatial planning and development.

**FIGURE 4** Coverage of spatial plans in the WFUA



Source: Author's analysis

**TABLE 2** Percentage of local plan coverage in Municipalities

	Municipality Area (ha)	Plan area (ha)	Percent of local plan coverage
Kowal City	468	27.5	5.9
Brześć Kujawski	15,095	930	6.2
Chocień	9,985	1,249	12.5
Fabianki	7,584	5.8	0.1
Kowal	11,479	174.5	1.5
Lubanie	6,941	421.5	6.1
Włocławek	22,062	1,559	7.1
Włocławek City	8,432	2,412	28.6

Source: interviews with municipalities

# **SCOPE OF WORK AND METHODOLOGY**

**The key objective of this component is to assist the Włocławek Urban Functional Area towards formulating a common Concept for Spatial Development that will determine future planning activities and the development direction of the eight municipalities forming the WFUA.** A WFUA Concept for Spatial Development was envisioned by the project partners and stakeholders as a means to spur the sustainable development of the WFUA, to reverse (or slow down) the process of depopulation in the area, as well as the loss of strategic urban functions in Włocławek. The Bank team was not charged with preparing the WFUA master plan as the available time and resources were insufficient for such work. However, the team was tasked to encourage the WFUA's municipalities to develop a joint vision of spatial development and to collaborate closer with each other. In addition, the team laid out some foundational spatial analysis to advance the preparation of such a plan.

**More specifically, the scope of technical assistance by the World Bank encompassed four main areas:**

- i) A series of spatial analyses as inputs to a WFUA Concept of Spatial Development
- ii) Participatory consultations and workshops with local stakeholders as a key process
- iii) Terms of reference samples for a WFUA Concept of Spatial Development and municipal studiums
- iv) Additional capacity building support and institutional strengthening efforts.

**TABLE 3 Key activities and outputs of the spatial planning component**

Activity/Output	Milestone/Date Completed
<b>1) Spatial analysis</b>	
Development restrictions thereby indicating compatibility of land uses.	Mid-February 2019, first draft; June 2019, final analysis.
Development suitability analysis.	Mid-February 2019, first draft; June 2019, final analysis.
Public facilities and amenities provision and gaps.	Mid-March 2019, first draft; June 2019, final analysis.
Identification of strategic development areas	End of April 2019, first draft; June 2019, final analysis.
<b>2) Consultation/workshops</b>	
Joint stakeholders' workshop	February 1, 2019
Series of individual consultation with each municipality	late February to early March, 2019
Final joint stakeholders' workshop	April 26, 2019
Follow-up workshop/consultation on specific issues	May 27, 2019
<b>3) Sample Terms of Reference (TOR)</b>	
TOR for the WFUA Concept of Spatial Development	End of April 2019, first draft; June 2019, final output.
TOR for the elaboration of studiums for each municipality	
<b>4) Additional capacity building support and institutional strengthening</b>	
Cost estimates for the elaboration of the spatial plans	End of April 2019, first draft; June 2019 final output.
Compiling capacity-building needs on spatial planning for each municipality, and interest and ideas for more organized institutional support	
Cost estimates on sample GIS training	

The work schedule was tailored for a single year (July 2018 – June 2019). Table 3 captures the key activities and outputs of this component. Elaboration of the methodology used, where relevant, are further described below (and in Annex 1).

## SPATIAL ANALYSIS

The WB team prepared four main types of spatial analysis to enable the identification of the development constraints and opportunities. These are:

- i) **Development restrictions/compatibility of land use**—acts as a negative filter that excludes certain plots from development, or identifies incompatible land use. The factors considered include: natural conservation areas, flooding risks, land slide risks, national security areas, buffer zones of strategic/major utilities/infrastructure, and arable land with level I-III soil quality categories (except in urban areas), and so on.
- ii) **Development suitability analysis**— categorizes land plots into five bands (already developed/restricted, low, medium, high and very high suitability) according to their potential for development. The factors considered and weighed include: the plot size, the distance to city center, proximity to existing or planned main road, parcel shape and ownership. A further layer of restrictions (mainly derived from the first analysis) was overlaid to present a more complete picture of the development suitability.
- iii) **Public facilities and amenities provision and gaps**– identifies the existing coverage and gaps in the public facilities and amenities provision (specifically for medical centers [2000 meter radius), kindergartens [500 meter radius) and primary schools [1,000 meter radius]).
- iv) **Identification of strategic development areas** — guides municipalities, through a facilitated and qualitative exercise, to consider various factors (for example, economic, social, environment, infrastructure, development objectives, and so on) when trying to identify and prioritize strategic development areas within their jurisdiction. To facilitate better coordination and collaboration amongst the municipalities, the location, primary function and intention of these identified areas are then compiled and presented to the WFUA.

(See detailed methodology and accompanying material in Annex 1.)

The project partners agreed that these four areas were essential for the future work on a joint WFUA master plan and that they were feasible to achieve within one year with the available data.

**Close collaboration between all the project partners was crucial for preparing and finetuning the analysis.** The team started with an inventory of the existing data. The Marshal's Office (MO) and the Office for the Spatial and Regional Planning (OSRP) actively supported further data gathering and shared their repositories, such as those prepared for the Infostrada project. The existing data for the WFUA was generally of good quality and needed only minor cleaning up to achieve proper results. Key input datasets into the analysis included: digitized versions of the cadastre, land ownership, building footprints, transport and business infrastructure, land cover characteristics, classification of arable land, and others. This collaboration significantly accelerated the process of data analysis and avoided the repetition of data and analysis that were already previously available.

**The Bank team took the lead on developing the methodology and preparing the initial analysis, and the draft outputs went through several rounds of feedback and consultation with the stakeholders.** Methodologies for the various spatial analyses were proposed by the WB team. They then consulted with the MO, the OSRP, and the WFUA municipalities. The consultations, and the feedback received, were critical to the spatial analysis methodology development and

production process. They greatly contributed to the quality, accuracy and usefulness of the eventual products, by allowing adjustments to be made to the assumptions used, and fine-tuning to be done that accommodated the local specificities and contextual factors.

**All raw data and analytical products were handed over to the project partners to enable their further elaboration and development.** All data consolidated and material prepared during the project are owned by the project partners and are shared in the necessary formats (for example, both GIS geo-databases, shapefiles and layers, as well as production-ready formats, such as jpegs and pdfs). These can then be easily modified and used as an input to continue the work on the joint master plan of the WFUA, as well as by the individual municipalities.

## CONSULTATION AND WORKSHOPS WITH PROJECT STAKEHOLDERS

**The project partners agreed from the onset that close collaboration with the local stakeholders and their active involvement in the process is key to the success of the project.** Hence the scope of the work emphasized an interactive and participatory process for the implementation of the project. Both consultations with individual WFUA municipalities, as well as large joint-stakeholder workshops, were conducted, with the MO and OSRP acting as coordinators throughout the project implementation period. This was further supplemented by regular steering committee meetings, held at the CUR3 initiative level, that helped resolve key strategic issues. The collaborative process was also seen as crucial for the project's sustainability and its continuation beyond the CUR3 program.

**The consultative and interactive process is a project output in itself.** The process helped strengthen the collaboration between the various stakeholders toward formulating the WFUA Concept of Spatial Development, especially among the eight municipalities. During the project identification phase, the lack of an institutionalized collaboration platform for the WFUA municipalities was perceived as a critical area for action. While creation of an institution, for instance an official WFUA association, was not set as a target, the stakeholders agreed that closer collaboration among the WFUA municipalities would be beneficial. The activities in this component, thereby provided the opportunities and space for more frequent dialogues and exchanges on the spatial planning and development in the process.

Stakeholders' involvement ensures better buy-in and produces results and outputs which are more valuable and useful. As mentioned previously, feedback from stakeholders is critical to producing quality and useful products. The eventual products from this engagement were shaped and modified along the way as new evidence and circumstances emerged. This flexibility in adjusting the scope of the assistance, helps deliver results that are most suited to the stakeholders' needs and expectations. By shaping the process and outcomes of the project, the stakeholders took ownership of the engagement. The consultative and participatory process also facilitated a better understanding of the methodology used for the analysis, and encouraged the municipalities to take advantage of the technical assistance for the benefit of their current and future work, thereby enhancing the sustainability of the project results.

## TERMS OF REFERENCE (TOR) FOR THE WFUA CONCEPT OF SPATIAL DEVELOPMENT AND THE MUNICIPAL STUDIUMS

Since the WFUA Concept of Spatial Development is not mandated by Polish law, there is not a specific format or mandated components. However, project partners agree that such a plan should describe the key parameters for development, indicate the directions and priorities for spatial development, and identify key cross-jurisdictional infrastructure locations, among other functions. The WB helped prepare a sample TOR that proposed key sections on: the scope of the work for the strategy preparation, technical details that should be included, a preparation and consultation process, timeline and budget division at each stage of the work on the strategy, documentation needed for the strategy preparation, criteria for the selection of a consulting company, and general criteria for the bid assessment (see Annex 3).

In Poland, municipalities are responsible for preparing both the studiums and the spatial plans. While studiums set out general functions and land use (for example, residential, industrial, environmentally protected, and so on) within the municipal territory they are not legally binding documents. On the other hand, even though spatial plans are not obligatory, they are legally binding and specifically prescribe how a given plot can be used (floor area ratio, height of buildings, setbacks, and so on). In essence, the municipalities are required to have studiums, while spatial plans are optional. However, in reality studiums are often outdated, and spatial plans cover a very limited area of the municipality (on average, around 30% of Poland's territory is covered with spatial plans).

Better guidance and recognition of best practices in the methodology and format for the studiums and spatial plans would enhance the WFUA-wide compatibility of these strategic documents. Currently, the municipalities do not have good references or guidance on how to prepare the planning documents (studium and spatial plan). The 2003 Spatial Planning Law<sup>7</sup> emphasizes the process of document preparation and the general content of studiums and plans, but the technical details and solutions are, understandably, not in the law. In general, insufficient guidance has been given to the local authorities and planners on how to best conduct the analysis and prepare the documents. As a result, a range of quality and technical differences exist in the plans, rendering them incompatible with each other.<sup>8</sup> The situation is further complicated by the fact that the municipalities usually outsource the preparation of such planning documents to private companies, and there is a lack of industrial standards in the planning methodology. The introduction of best practices or sample templates of TORs for preparing planning documents could be a useful way to ensure the compatibility and the quality of the planning documents.

A TOR for the elaboration of studiums was also prepared. The underlying assumption was that when municipalities agree on the key features of the WFUA master plan, the next step will be to update their studiums and further develop the spatial plans. Prepared sample TORs are useful to streamline this process and ensure a better guided and coordinated approach for the studiums and spatial plans across the WFUA. The draft was created in consultation with the stakeholders and was adjusted to the needs expressed by the local authorities. It can also be used by the WFUA municipalities to commission other works related to these documents (for example, updating previous plans or drafting new documents) (see Annex 4).

# **KEY OUTPUTS AND FINDINGS**

## SPATIAL ANALYSIS

**A large proportion of land (more than 80%) in the WFUA encounters some development restrictions; these includes areas with flood risk (1 in 100-years flood zone), natural protection areas, forested areas and arable land.** Approximately 22% of the WFUA is nature protection areas (mostly in the east and the north-west), around six percent are subject to flooding risks, and around 34% are considered arable land (with top soil quality of class I-III, which by law is excluded from development, unless 'de-farmed' by the decision of the Ministry of Agriculture), mostly in the south and the west of the territory. In addition, some 27% of the WFUA are covered by forests (mostly in the central part of the WFUA, see Figure 5.) Overall, areas that do not have any development restrictions constitute only around 18% of the WFUA territory. Such a limited amount of developable land requires even better and more forward-looking planning from the local authorities to ensure sustainable development and to balance the multitude of interests of the citizens and the potential investors.

**It is useful to note that some of these constraints do not imply the prohibition of all development, but certain conditions of development, or the compatibility of land use proposed, would have to be considered.** In addition, while the high classification of arable land constitutes a development restriction, there are cases where the municipalities or investors could apply for a waiver with the Ministry of Agriculture, or for the conversion of such land. However, the municipalities interviewed indicated that this is typically a lengthy and complex process, and success is not guaranteed.

**De-farming is a major development concern for most municipalities, given the large areas in the WFUA classified as high-quality arable land (topsoil quality class I-III).** Many parcels suitable for development, such as, in the southern and western part of the WFUA, cannot currently be easily developed due to this restriction. While good quality arable land should indeed be protected for the sake of food production and the longer-term sustainability and self-sufficiency of the country, inflexible protection of such plots, especially within urban areas, should be reassessed.

**Without considering the arable land area as an absolute restriction, there are a good amount of land plots which are very highly (around five percent) or highly suitable (around 41%) for development (see Figure 6).** However, when we juxtapose the development suitability with the land development restrictions analysis results (see Figure 7), we notice a more nuanced picture. If the arable land areas are also considered as a restriction, the amount of land plots determined as being of very high suitability and high suitability for development, drops to around two percent and 14% respectively. (In Figure 7, the dark red and red areas mark plots with very high and high development suitability. Orange areas indicate plots with medium suitability, while plots with restrictions have an overlay of hatched areas in brown and green [arable land I-III and natural reserves respectively]).

**These analyses suggest that the areas suitable for development are mostly located in the municipalities of Fabianki, Kowal, Chocień, Luban, Brześć Kujawski, Włocławek, and in the outskirts of Włocławek City.** The WFUA territory west of the A1 highway has development restrictions due to a high class of arable land there. The center of Włocławek City is already highly developed, and the area most suitable for development lies on its outskirts or in the neighboring municipalities, for instance, in the Fabianki and the Włocławek municipality. These results make

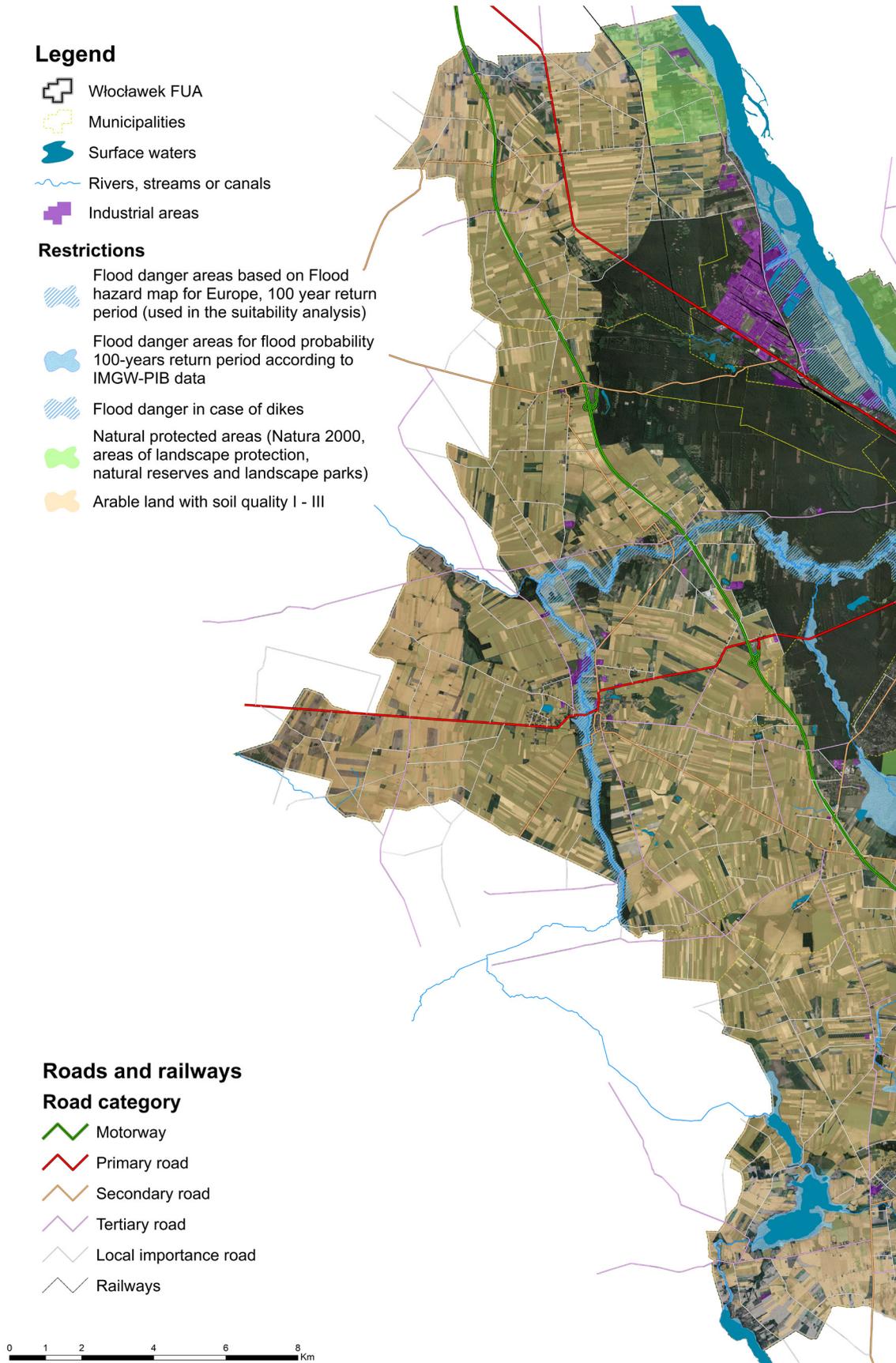
clear that to propel further development in the WFUA, either the urban regeneration of the current built-up areas (not covered in the current analysis), or the new development of areas in the municipalities that lie in the periphery of the WFUA, need to be carefully executed.

**While some municipalities have already prepared local spatial plans for the areas suitable for development, most municipalities have not.** Four municipalities stand out, in terms of the coverage with spatial plans of the areas that have good development suitability, namely: Włocławek City, and the municipalities of Włocławek, Brześć Kujawski and Chocień. These plots that are identified as, both suitable for development and having spatial plans ready, offer the best conditions for development. On the other hand, many plots identified as very high or highly suitable for development do not yet have spatial plans. The lack of plans might be explained by the fact that their preparation is time-consuming and costly, and sometimes has potential fiscal implications for the municipalities<sup>9</sup>. The local authorities, therefore argue, that it is more prudent for them to wait until an investor expresses interest before developing a spatial plan. However, without proactive planning (that includes visioning or branding), it may be difficult to attract the attention of an investor in the first place. To resolve this development dilemma, the WB team worked with the stakeholders on the exercise to identify strategic areas for development (discussed in later sections).

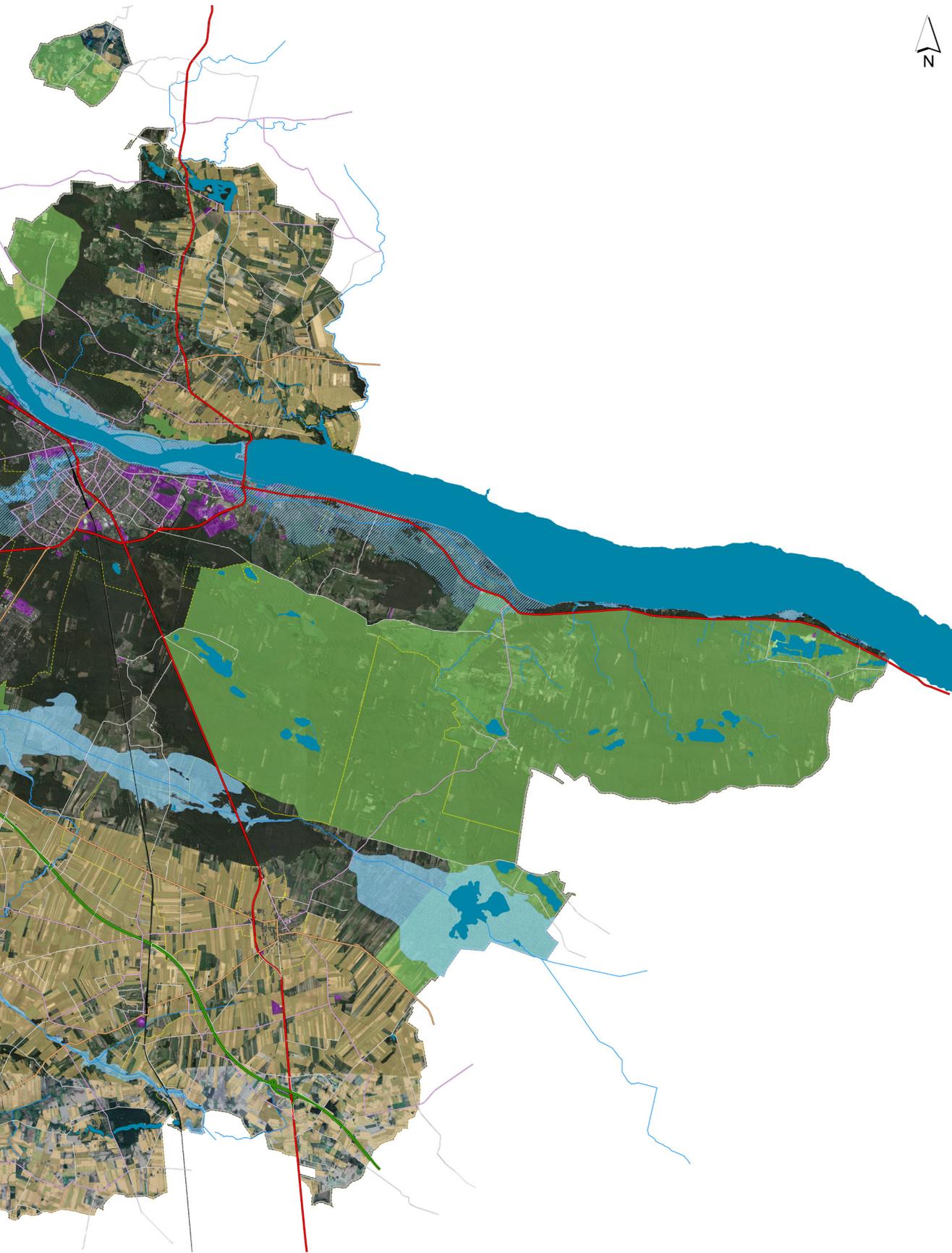
**Through an interactive and qualitative process, the municipalities were guided to consider various factors to help them identify and prioritize strategic areas of development within their jurisdiction; the primary function (economic, residential or tourism) of such strategic areas were also discussed.** While the local stakeholders have excellent and intimate knowledge of the development conditions within their communities, development decisions are often intuitive when lacking the necessary tool to guide informed choices. An excel tool was thus introduced as a potential methodology for the municipalities to consider and conduct a relative rating, based on a variety of factors (ranging from economic, social, environment and infrastructure, to the opportunities or objectives for development, key beneficiaries, and the potential development modality and timeframe, see Table 4). At this stage, the tool is applied qualitatively, and the factors are by no means exhaustive. The tool could be further modified to include other factors deemed important and developed into a quantitative matrix in the future (and perhaps incorporated into the elaboration of the WFUA master plan) to better inform choices.

**The municipalities appreciated understanding what each other's strategic development areas are. Further deliberations and diagnostics on the selection of the WFUA's strategic areas are still needed.** When all the initially identified strategic areas from each municipality were consolidated and presented to the WFUA (see Figure 8), it was a revelation for many of the stakeholders to see this for the first time. Furthermore, from the exchange during the second workshop, two of the areas seem to offer the greatest opportunity for the WFUA's development - the areas near to A1 highway exits and the Włocławek reservoir, around which residential and tourism investments could develop. However, further diagnostics are needed to gauge the feasibility of developing these areas (including considerations about the timing, budget, potential demand, obtaining ministerial decisions to waive the arable land restrictions, and so on). In addition, the implications of such developments on the WFUA as a whole, (in terms of transport needs and congestion, availability of labor force, and the opportunities to develop areas with different land use functions in other municipalities) will need to be considered. The intention is for this analysis to be taken forward in the next steps of developing the WFUA's master plan.

**FIGURE 5** Land development restrictions in WFUA



Source: Authors' analysis



**FIGURE 6** Development suitability analysis of WFUA

**Legend**

-  Włocławek FUA
-  Municipalities
-  Buildings
-  Surface waters

**Land plots suitability for development**

-  Very high
-  High
-  Medium
-  Low
-  Landplots already developed or with restrictions

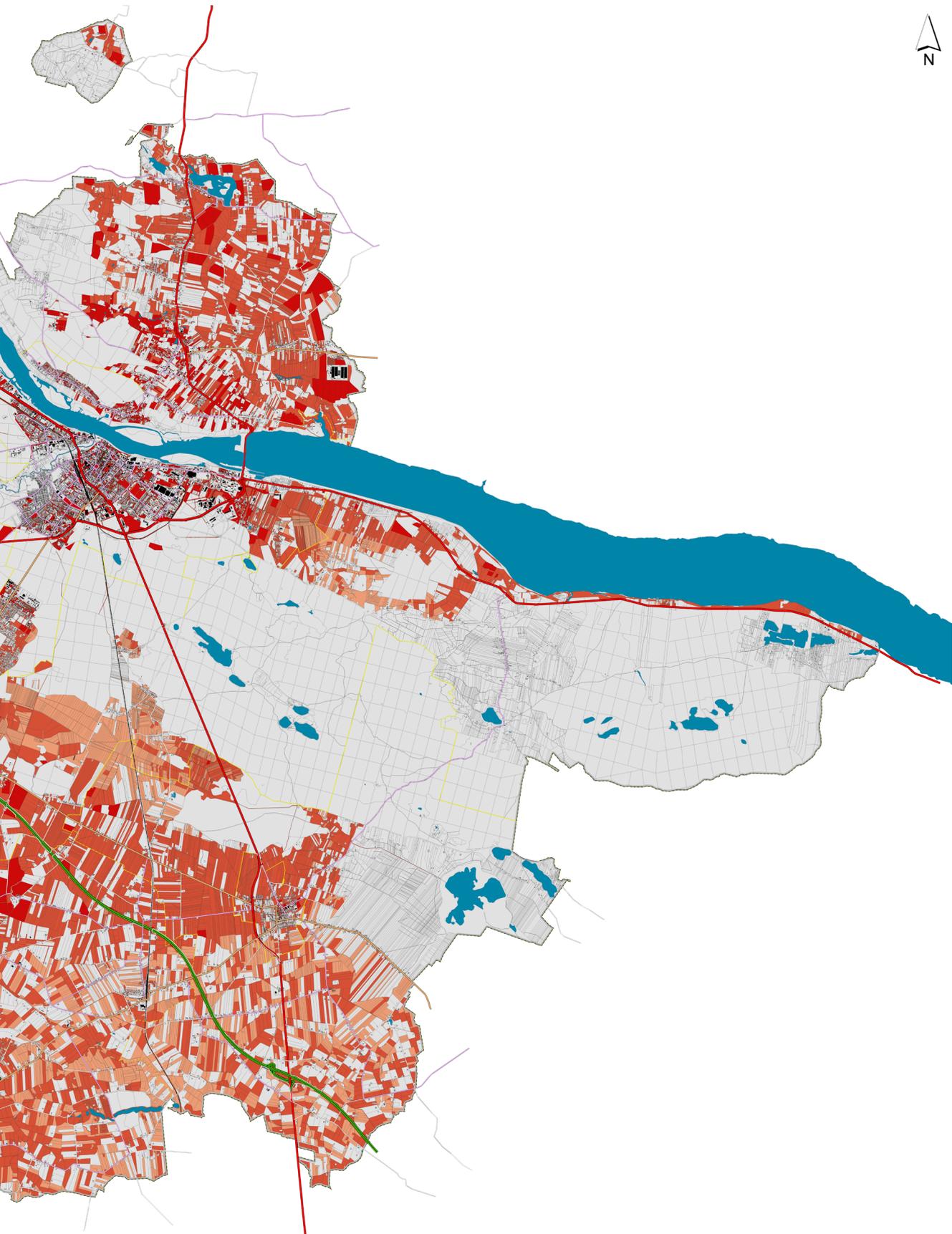
**Roads and railways**

**Road category**

-  Motorway
-  Primary road
-  Secondary road
-  Tertiary road
-  Local importance road
-  Railways



Source: Authors' analysis



**FIGURE 7** Development suitability and land development restriction analyses of WFUA

**Legend**

-  Włocławek FUA
-  Municipalities
-  Areas covered by local plans
-  Buildings
-  Surface water

**Land-plots suitability for development**

-  Very high
-  High
-  Medium
-  Low
-  Landplots already developed or with restrictions

**Roads and railways**

**Road category**

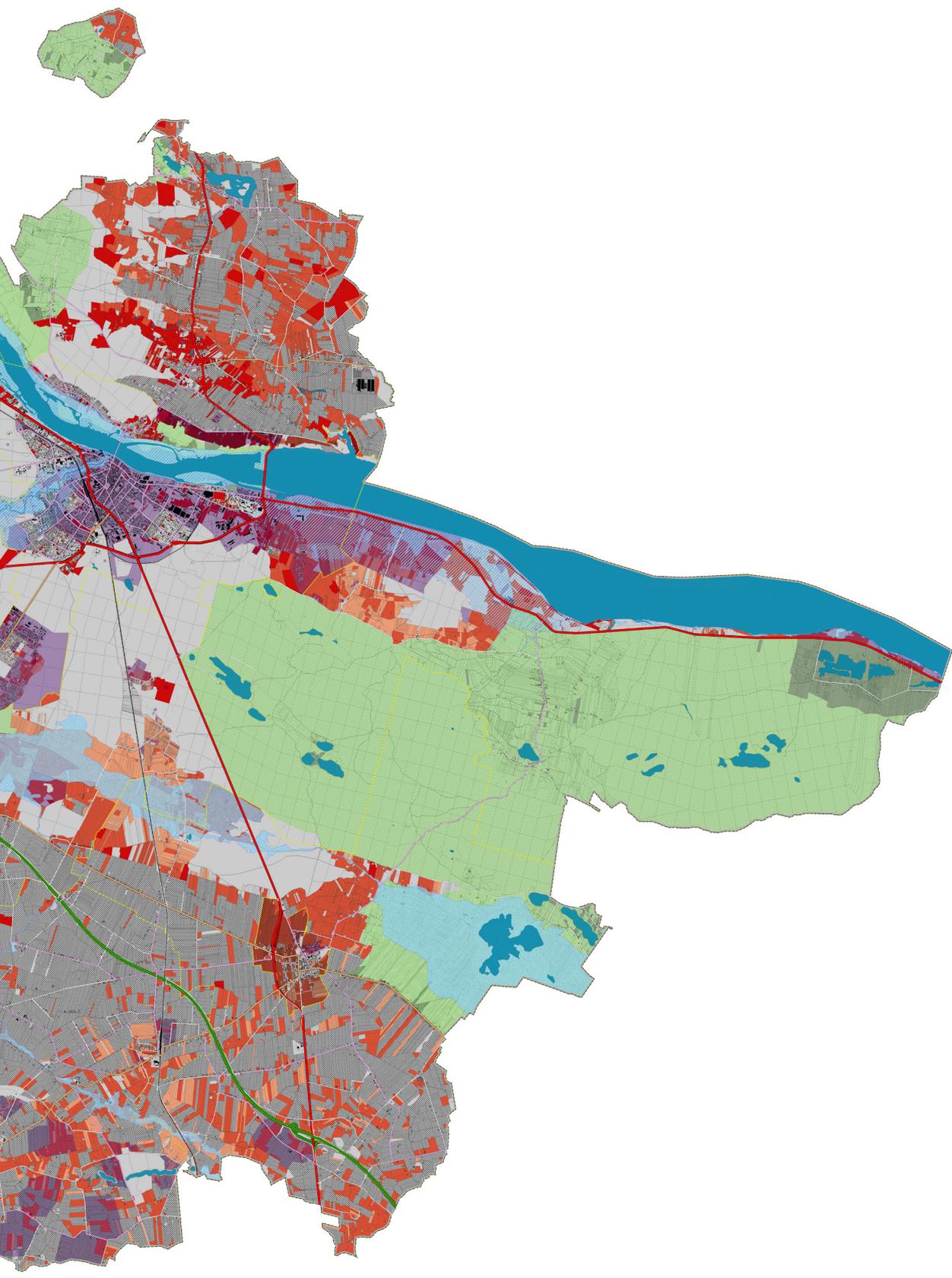
-  Motorway
-  Primary road
-  Secondary road
-  Tertiary road
-  Local importance road
-  Railways

**Restrictions**

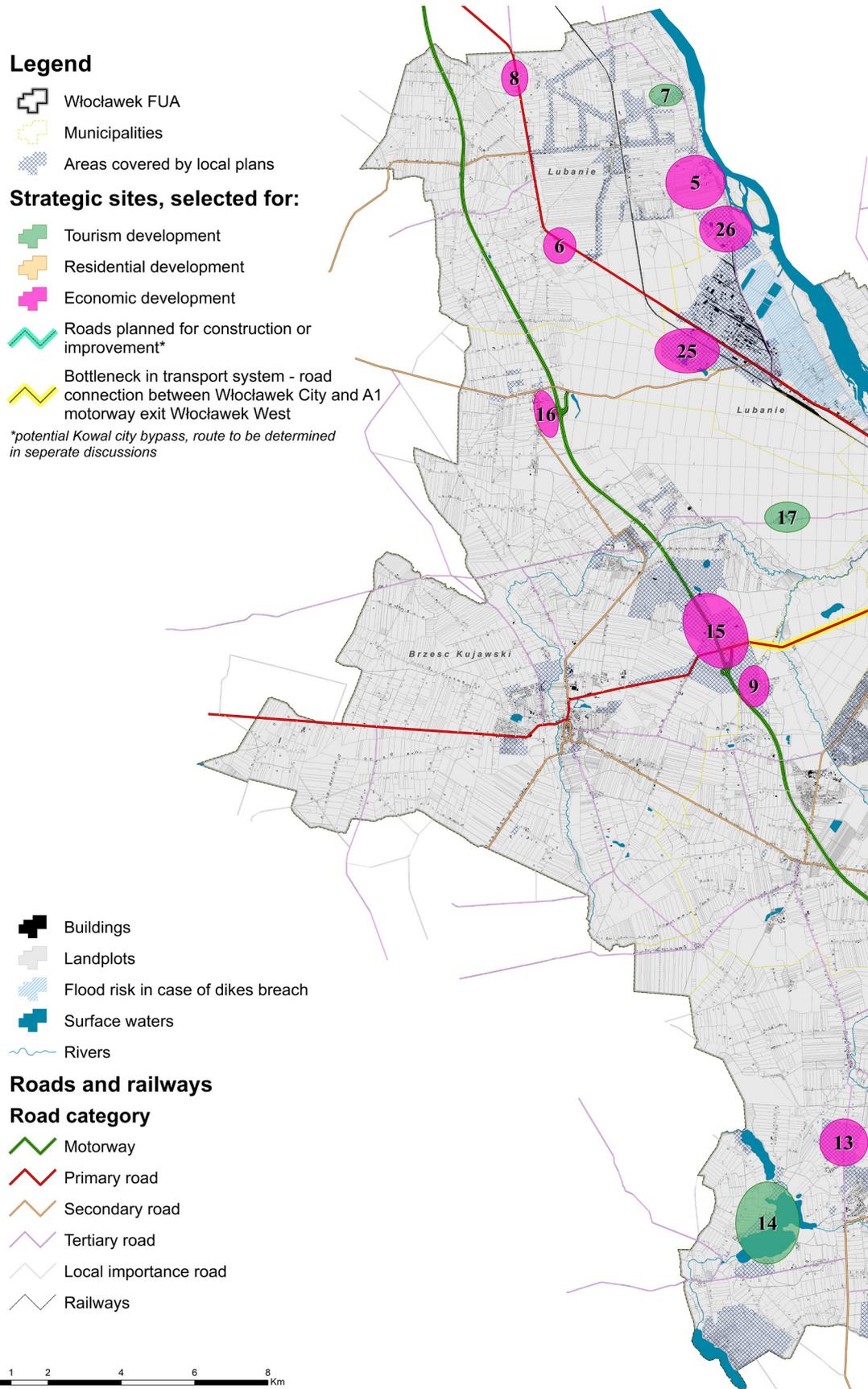
-  Flood danger areas based on Flood hazard map for Europe, 100 year return period (used in the suitability analysis)
-  Flood danger areas for flood probability 100-years return period according to IMGW-PIB data
-  Flood danger in case of dikes
-  Natural protected areas (Natura 2000, areas of landscape protection, natural reserves and landscape parks)
-  Arable land with soil quality I - III



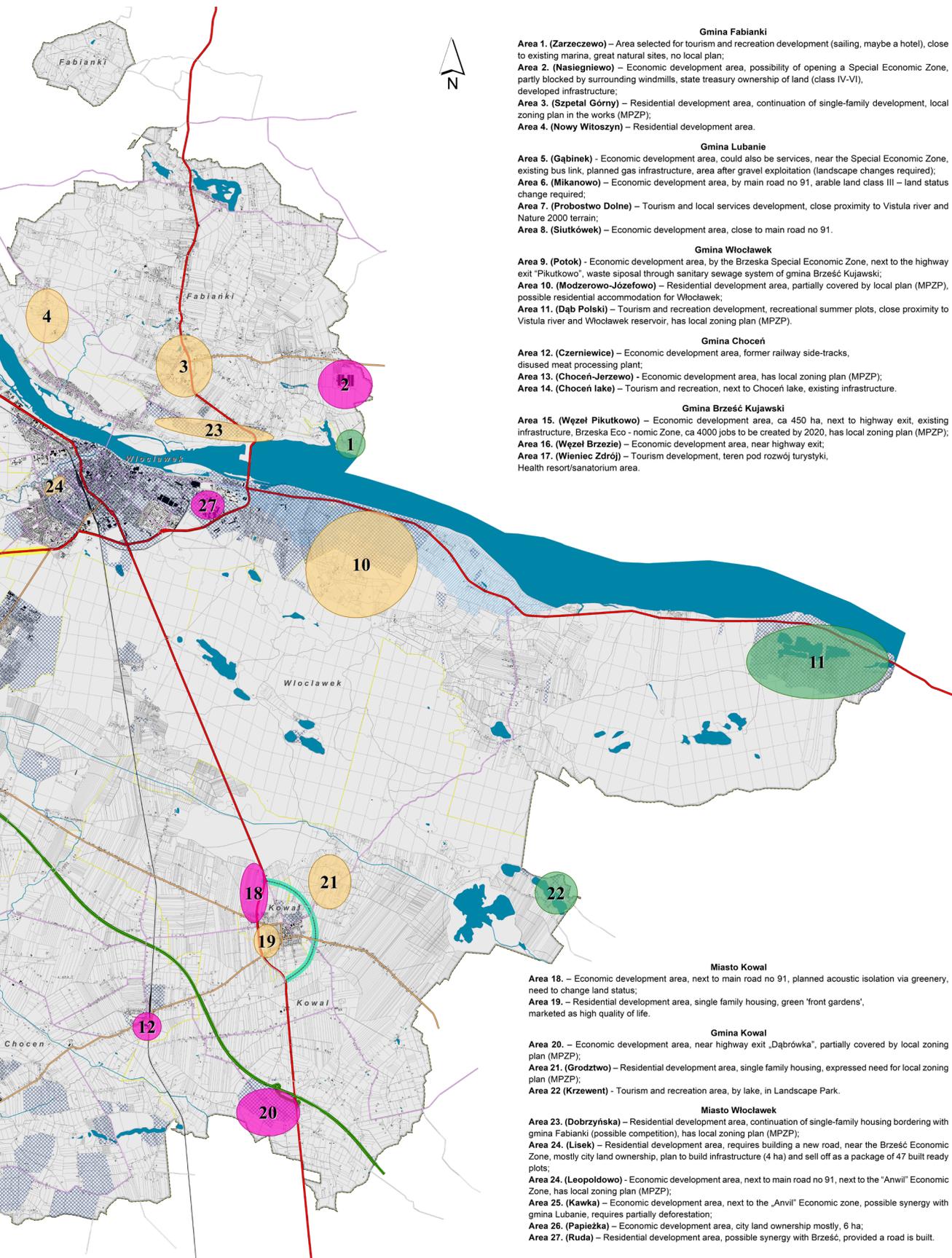
Source: Authors' analysis



**FIGURE 8** WFUA's strategic development areas (as indicated by municipalities)



Source: Authors' analysis



**Gmina Fabianki**

- Area 1. (Zarzewo)** – Area selected for tourism and recreation development (sailing, maybe a hotel), close to existing marina, great natural sites, no local plan;
- Area 2. (Nasiegniewo)** – Economic development area, possibility of opening a Special Economic Zone, partly blocked by surrounding windmills, state treasury ownership of land (class IV-VI), developed infrastructure;
- Area 3. (Szpetal Górny)** – Residential development area, continuation of single-family development, local zoning plan in the works (MPZP);
- Area 4. (Nowy Witoszyn)** – Residential development area.

**Gmina Lubanie**

- Area 5. (Gałbinek)** - Economic development area, could also be services, near the Special Economic Zone, existing bus link, planned gas infrastructure, area after gravel exploitation (landscape changes required);
- Area 6. (Mikanowo)** – Economic development area, by main road no 91, arable land class III – land status change required;
- Area 7. (Probostwo Dolne)** – Tourism and local services development, close proximity to Vistula river and Nature 2000 terrain;
- Area 8. (Siutkówek)** – Economic development area, close to main road no 91.

**Gmina Włocławek**

- Area 9. (Potok)** - Economic development area, by the Brzeska Special Economic Zone, next to the highway exit "Pikutkovo", waste disposal through sanitary sewage system of gmina Brześć Kujawski;
- Area 10. (Modzerowo-Józefowo)** – Residential development area, partially covered by local plan (MPZP), possible residential accommodation for Włocławek;
- Area 11. (Dąb Polski)** – Tourism and recreation development, recreational summer plots, close proximity to Vistula river and Włocławek reservoir, has local zoning plan (MPZP).

**Gmina Choczeń**

- Area 12. (Czerniewice)** – Economic development area, former railway side-tracks, disused meat processing plant;
- Area 13. (Choczeń-Jerzewo)** - Economic development area, has local zoning plan (MPZP);
- Area 14. (Choczeń lake)** – Tourism and recreation, next to Choczeń lake, existing infrastructure.

**Gmina Brześć Kujawski**

- Area 15. (Węzeł Pikutkowo)** – Economic development area, ca 450 ha, next to highway exit, existing infrastructure, Brzeska Eco - nomic Zone, ca 4000 jobs to be created by 2020, has local zoning plan (MPZP);
- Area 16. (Węzeł Brzezle)** – Economic development area, near highway exit;
- Area 17. (Wieniec Zdrój)** – Tourism development, teren pod rozwój turystyki, Health resort/sanatorium area.

**Miasto Kowal**

- Area 18.** – Economic development area, next to main road no 91, planned acoustic isolation via greenery, need to change land status;
- Area 19.** – Residential development area, single family housing, green 'front gardens', marketed as high quality of life.

**Gmina Kowal**

- Area 20.** – Economic development area, near highway exit „Dąbrówka”, partially covered by local zoning plan (MPZP);
- Area 21. (Grodztwo)** – Residential development area, single family housing, expressed need for local zoning plan (MPZP);
- Area 22. (Krzewent)** - Tourism and recreation area, by lake, in Landscape Park.

**Miasto Włocławek**

- Area 23. (Dobrzyńska)** – Residential development area, continuation of single-family housing bordering with gmina Fabianki (possible competition), has local zoning plan (MPZP);
- Area 24. (Lisek)** – Residential development area, requires building a new road, near the Brześć Economic Zone, mostly city land ownership, plan to build infrastructure (4 ha) and sell off as a package of 47 built ready plots;
- Area 24. (Leopoldowo)** - Economic development area, next to main road no 91, next to the "Anwil" Economic Zone, has local zoning plan (MPZP);
- Area 25. (Kawka)** – Economic development area, next to the "Anwil" Economic zone, possible synergy with gmina Lubanie, requires partially deforestation;
- Area 26. (Papieżka)** – Economic development area, city land ownership mostly, 6 ha;
- Area 27. (Ruda)** – Residential development area, possible synergy with Brześć, provided a road is built.

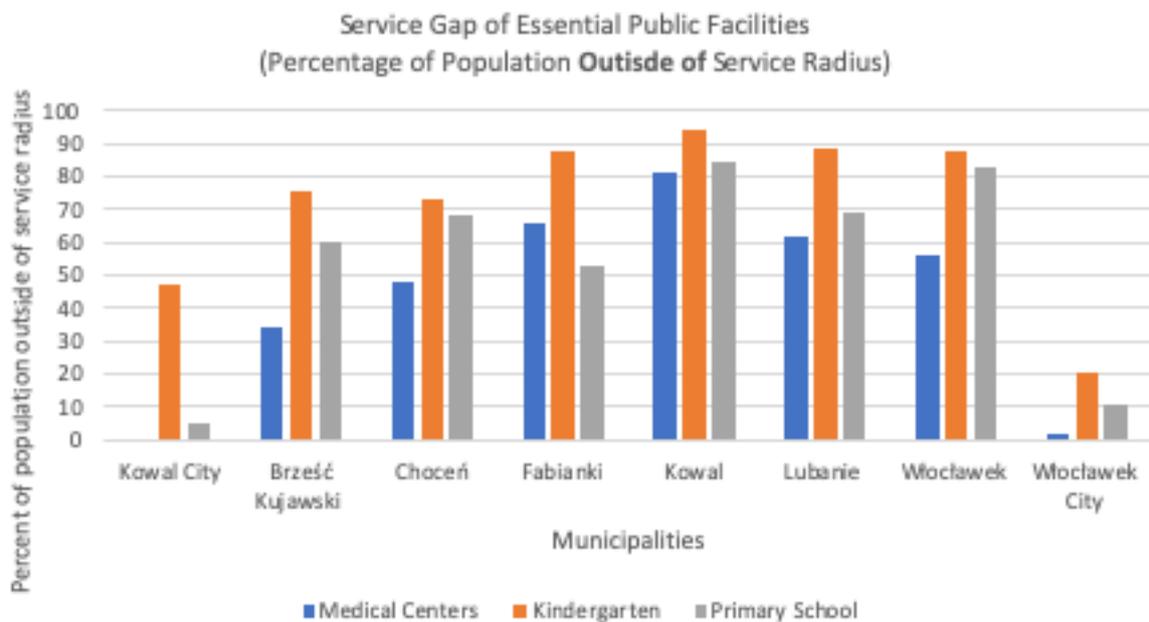
**TABLE 4** Key factors in determining and prioritizing strategic development areas

Economic	Concentration of businesses
	Provide employment
	Proximity to other economic centers/areas
Infrastructure	Ease of connectivity and accessibility
	• pedestrian
	• vehicular
	• public transit
	Availability of river transport
	Proximity to key infrastructure (for example, train station, stadium and others.)
	Availability of land/parcel/soft stock
	Proximity to the Włocławek reservoir
Social	Population catchment nearby
	Presence of unique characteristics and assets (for example, religious institutions, public art, museums, natural landscapes, gathering places, and historic buildings)
	Presence of community network
Environment	Environmentally non-sensitive area (for example, not a nature reserve, no endangered species)
	Low risks from environmental hazards (for example, landslides and floods)
	Proximity and connectivity to environmentally sensitive areas
Opportunities/ Objectives	Potential for enhancing the quality of life
	Potential for economic growth or to create economic impacts and synergies
	Potential for employment generation
	Potential for improving social inclusion
	Potential to address climate change impacts
	Potential to contribute to a green energy region and market
Beneficiaries	Residents and citizens
	Private sector
	Tourists and visitors
	Low-income and vulnerable groups
	Middle- to high-income groups
Potential Development Modality	Conservation
	Regeneration
	New development
Timeframe	Short term (within 5 years)
	Medium term (5–10 years)
	Long term (> 10 years)

Source: Authors' analysis

**The provision of essential public facilities (medical centers, kindergartens and primary schools) were examined and it was found that the coverage of these services was generally adequate, but there are large disparities across the different municipalities.** The service radius used in the analysis referred to the typical planning norms (2,000 meters for medical centers, 500 meters for kindergartens and 1,000 meters for primary schools; see Figures 9 to 12). It was found that on the average, around 14% of the population were not served adequately by medical centers, 36% by kindergartens, and 24%<sup>10</sup> by primary schools. However, for each individual municipality, the service coverage varied by a large amount, with Włocławek City and Kowal City having the best coverage of services (see Table 5). This implies that many municipalities may depend on Włocławek City and Kowal City to provide these services and therefore need to travel a long distance to access them. Such analysis of public facilities provision is useful to inform each municipality on their decision for opening, closing, relocating or consolidating public services according to the needs and location of the population. In addition, it is useful to consider the services provided in neighboring municipalities to determine the corresponding decisions.

**TABLE 5** Service gap of essential public facilities by municipalities



**FIGURE 9** Provision and coverage of basic public facilities in WFUA

**Legend**

-  Włocławek FUA
-  Municipalities
-  Settlements

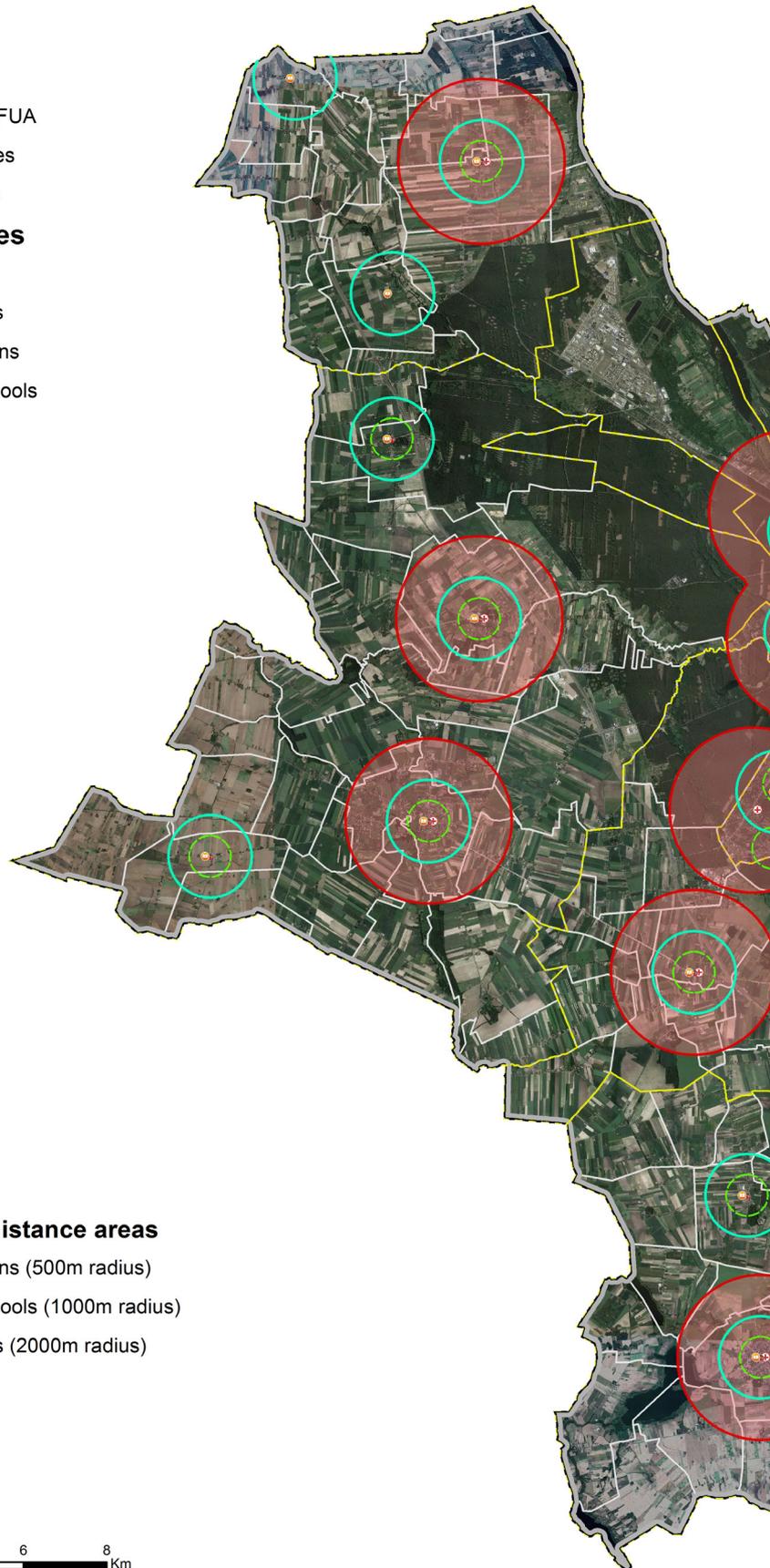
**Public facilities**

**Types**

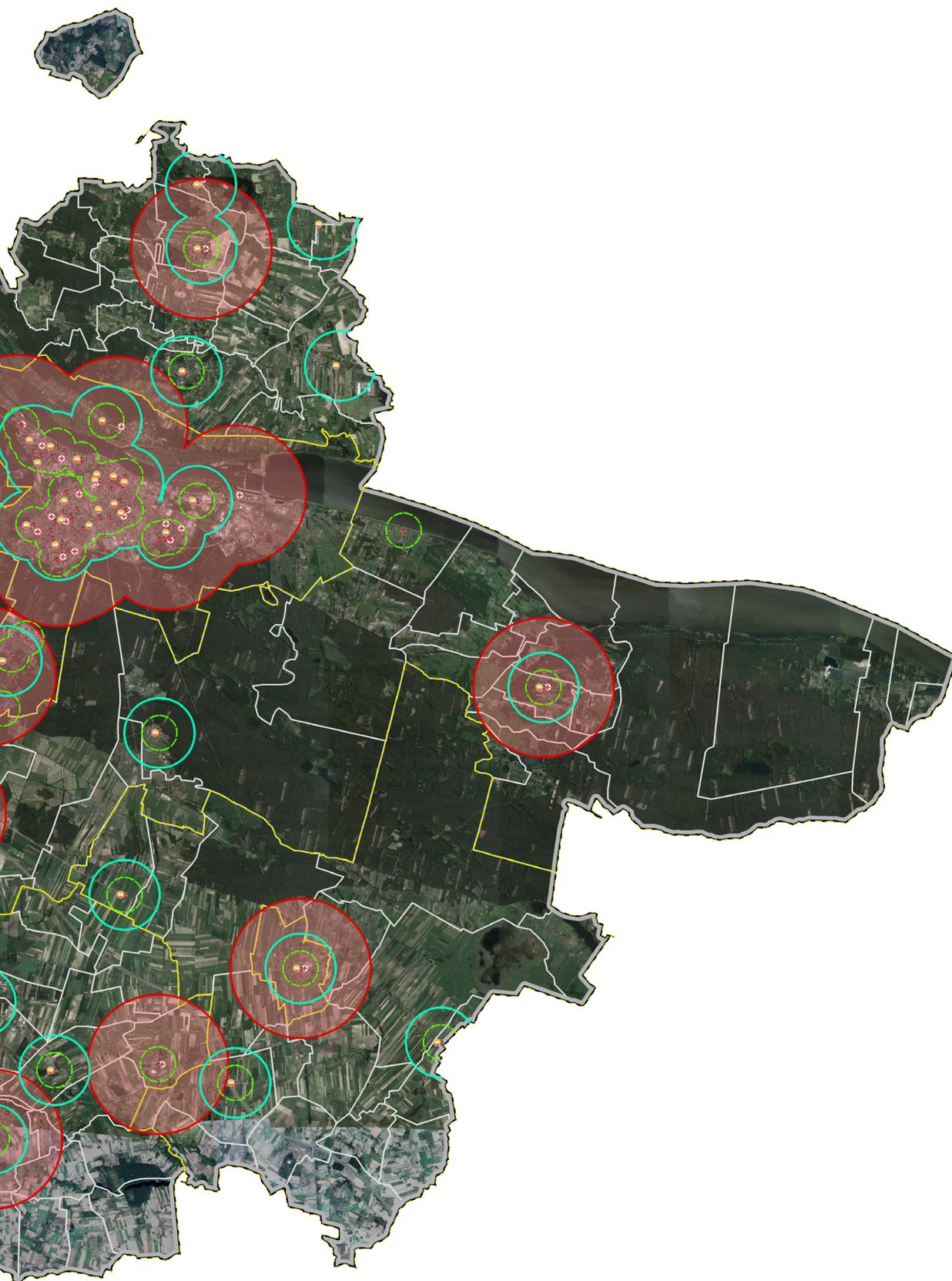
-  Basic clinics
-  Kindergartens
-  Primary schools

**Standardized distance areas**

-  Kindergartens (500m radius)
-  Primary schools (1000m radius)
-  Basic clinics (2000m radius)



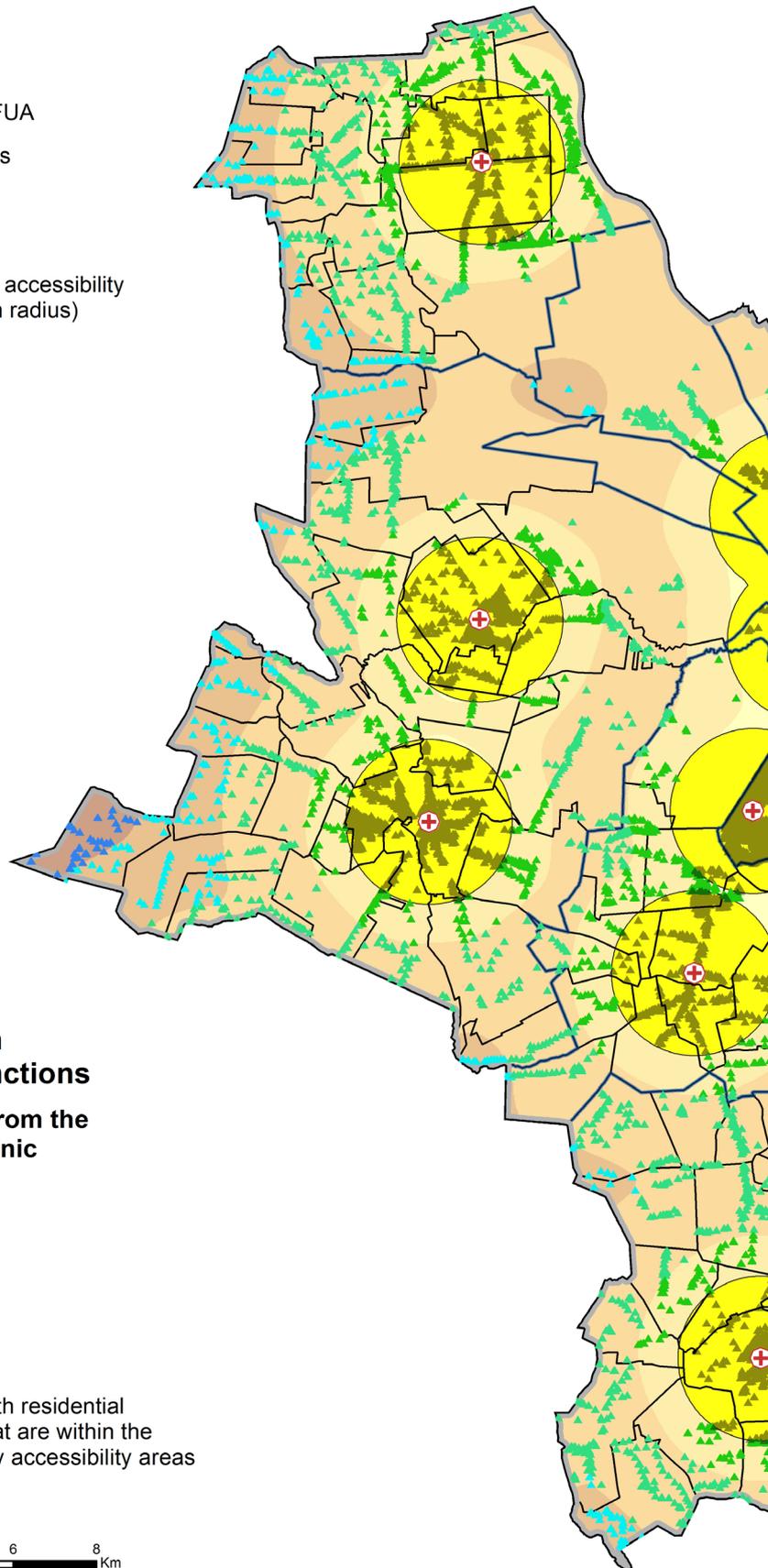
Source: Authors' analysis



**FIGURE 10** Provision and coverage of basic medical centers in WFUA

**Legend**

-  Wloclawek FUA
-  Municipalities
-  Settlements
-  Basic clinics
-  Basic clinics accessibility area (2000m radius)



**Buildings with residential functions**

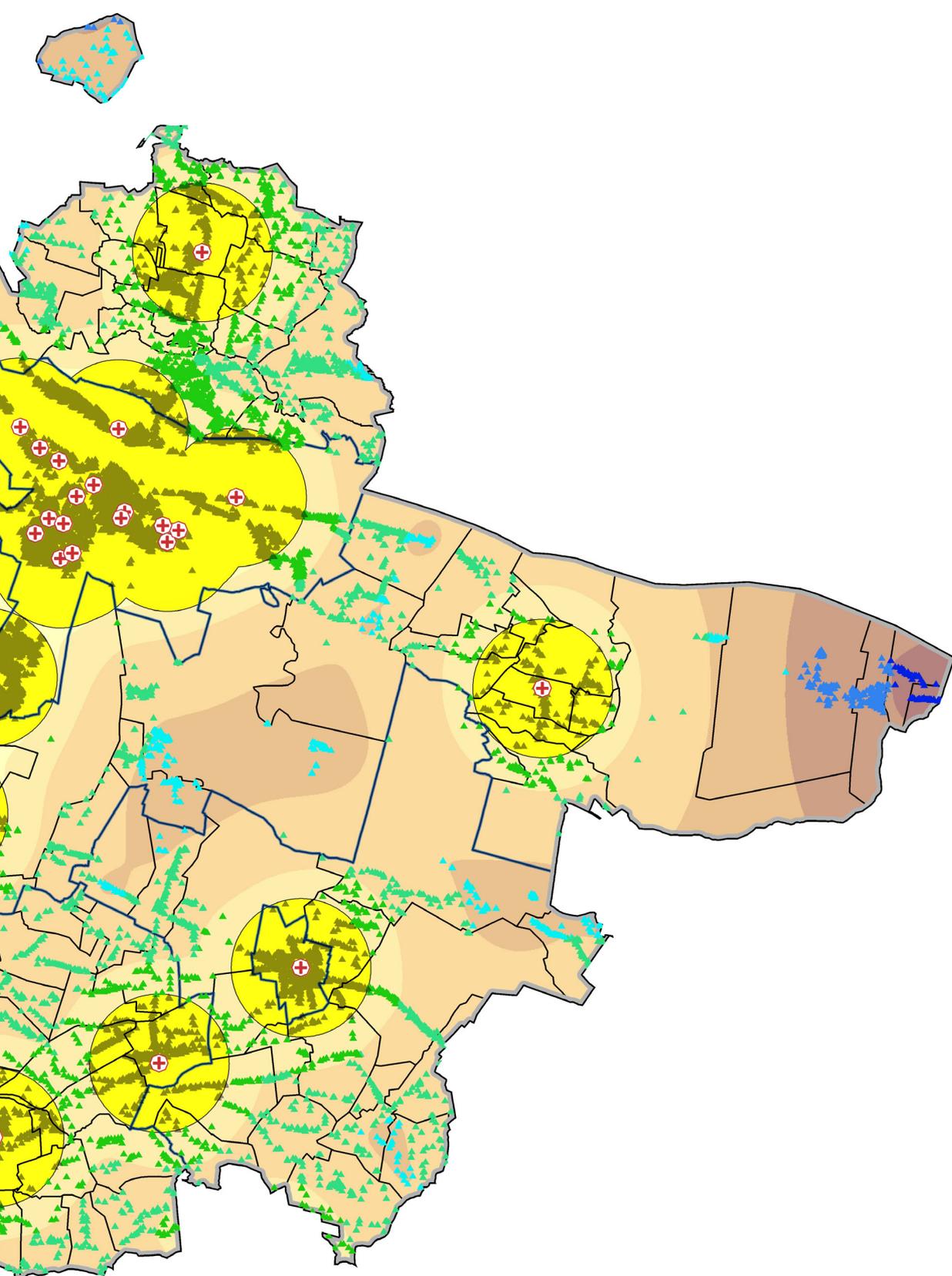
**distance in km from the nearest basic clinic**

-  2.0 - 3.0
-  3.1 - 5.0
-  5.1 - 7.0
-  7.1 - 10.0
-  10.1 - 11.4

 Buildings with residential functions that are within the public facility accessibility areas



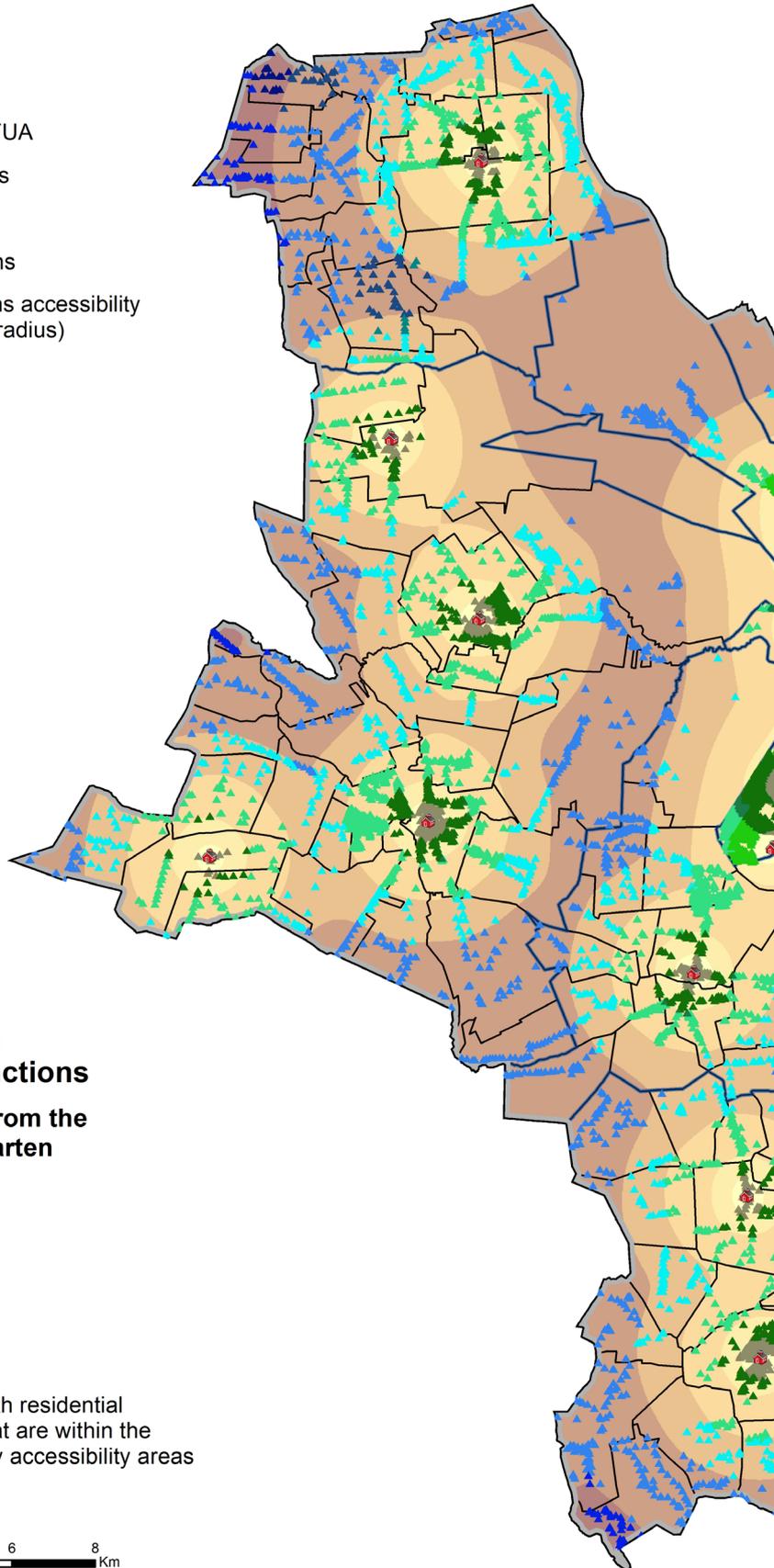
Source: Authors' analysis



**FIGURE 11** Provision and coverage of kindergartens in WFUA

**Legend**

-  Wloclawek FUA
-  Municipalities
-  Settlements
-  Kindergartens
-  Kindergartens accessibility area (500m radius)

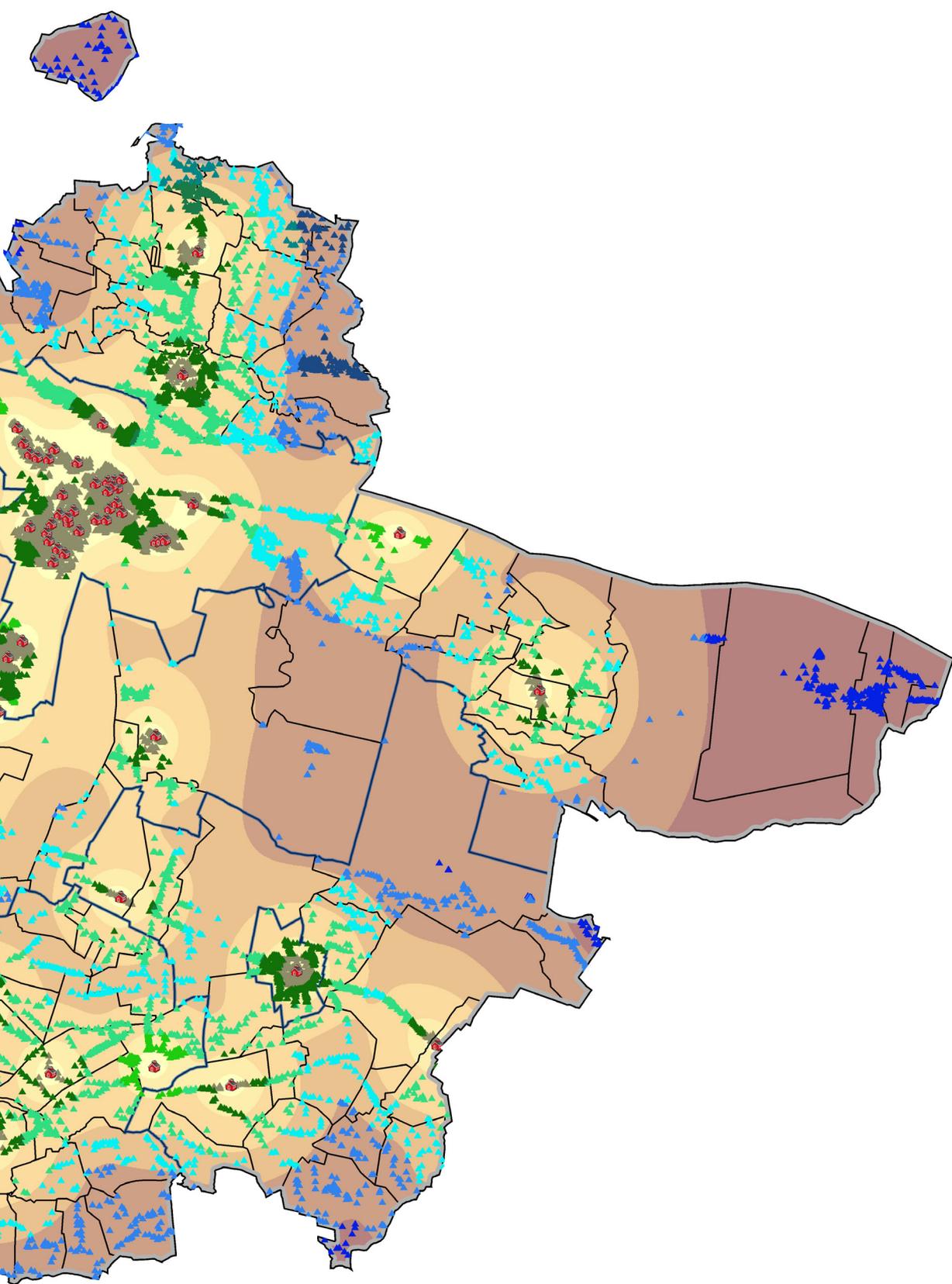


**Buildings with residential functions**  
distance in km from the nearest kindergarten

-  0.5 - 1.0
-  1.1 - 2.0
-  2.1 - 3.0
-  3.1 - 5.0
-  5.1 - 11.4
-  Buildings with residential functions that are within the public facility accessibility areas



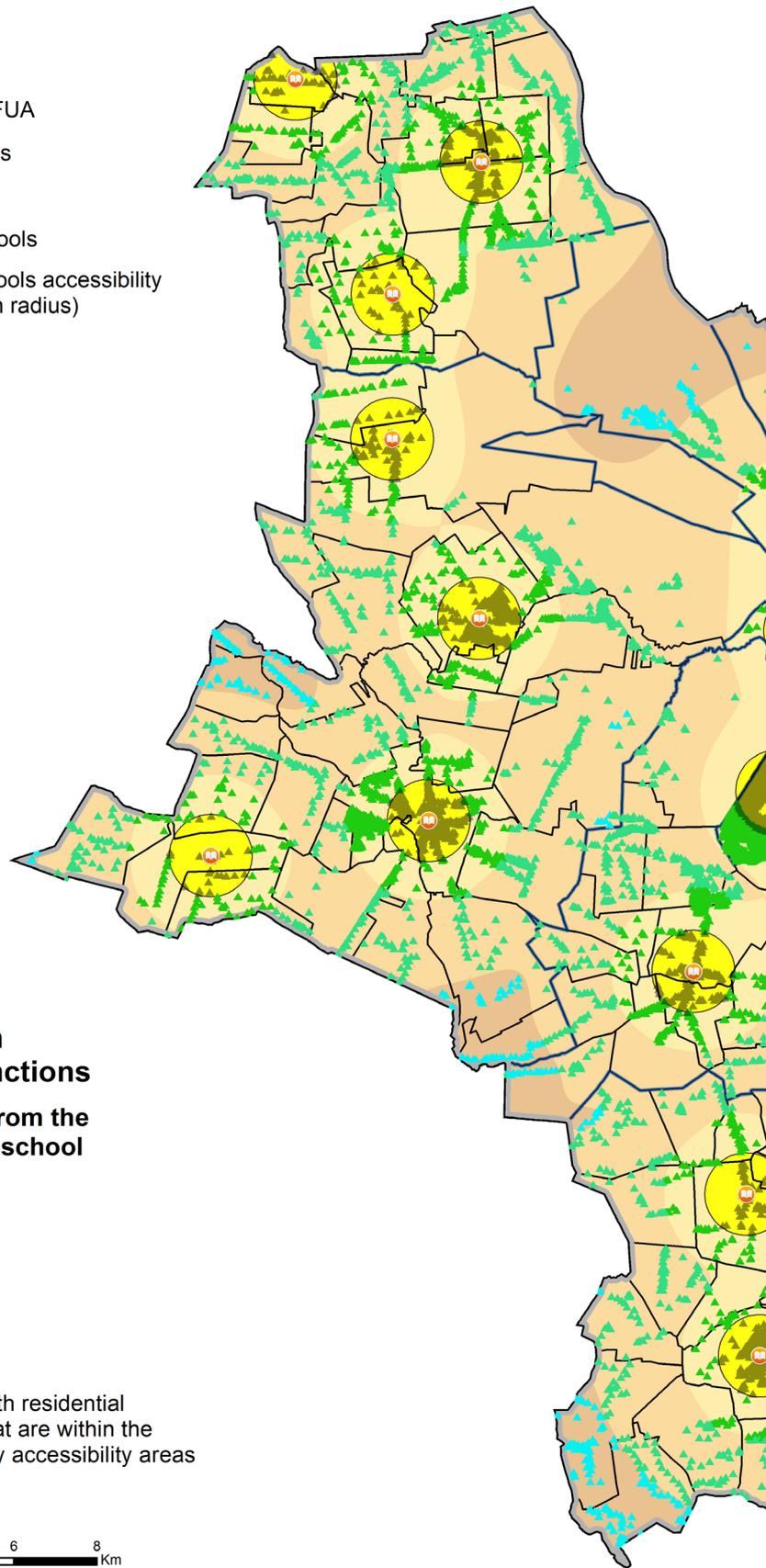
Source: Authors' analysis



**FIGURE 12** Provision and coverage of primary schools in WFUA

**Legend**

-  Włocławek FUA
-  Municipalities
-  Settlements
-  Primary schools
-  Primary schools accessibility area (1000m radius)



**Buildings with residential functions**

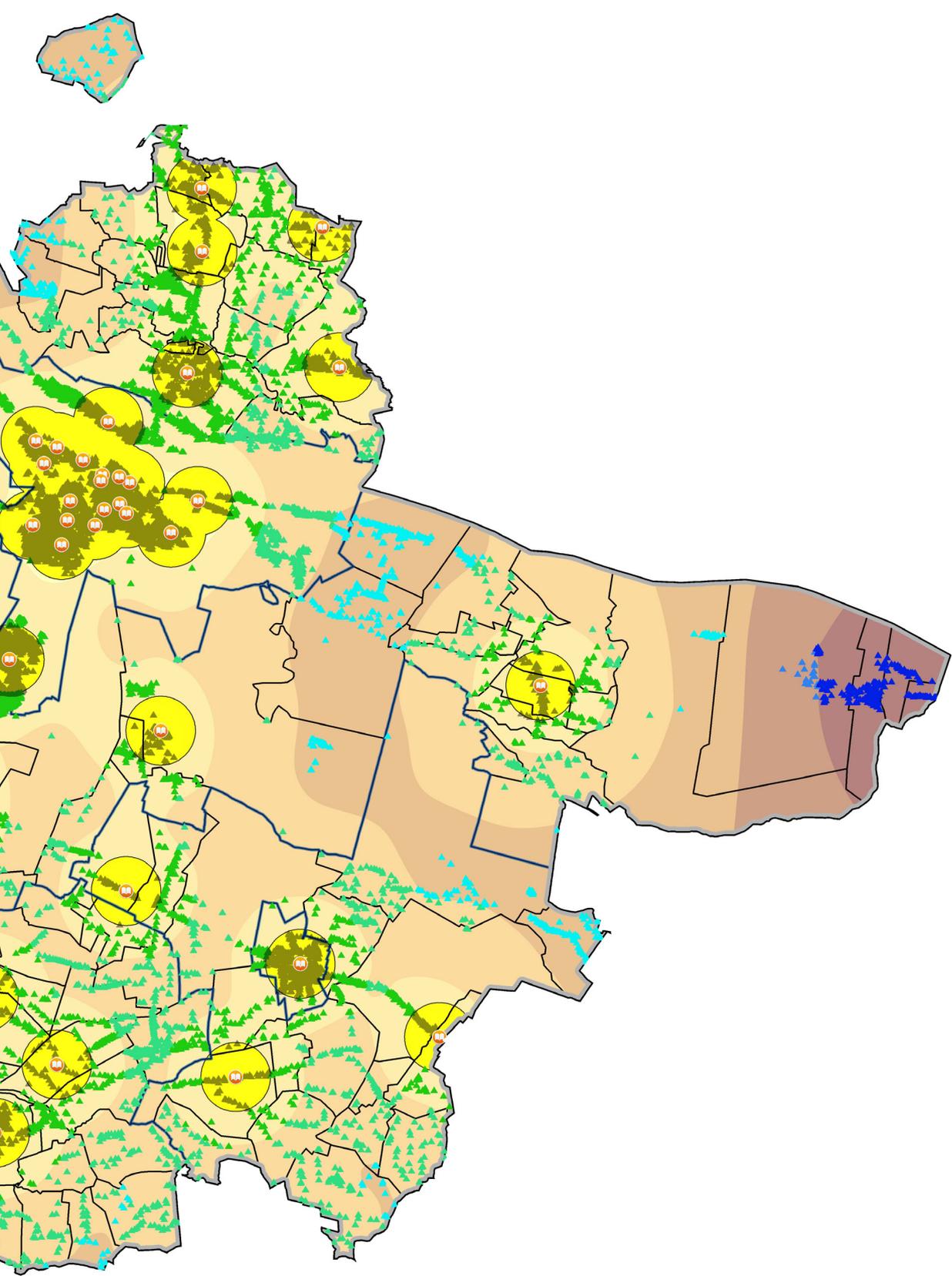
distance in km from the nearest primary school

-  1.0 - 2.0
-  2.1 - 4.0
-  4.1 - 6.0
-  6.1 - 8.0
-  8.1 - 11.4

 Buildings with residential functions that are within the public facility accessibility areas



Source: Authors' analysis



## KEY TAKEAWAYS ON COLLABORATION, CAPACITY AND INSTITUTIONAL ISSUES FROM CONSULTATIONS WITH THE WFUA MUNICIPALITIES

**The local authorities agree that Włocławek City is a natural center of gravity for the WFUA. With 75% of the WFUA's population, the city of Włocławek is the economic, cultural and social engine of the area.** Most of the city area is considered developed and it has been experiencing significant population outflows in the recent years. These developments clearly indicate a two-way relationship where the WFUA needs a strong and functional core, but the center also requires support from the hinterland and surrounding municipalities to propel further growth for the entire WFUA.

**The WFUA municipalities acknowledge that collaboration could be improved on various aspects related to spatial planning.** Currently, there is an absence of regular dialogues, a formal platform or the modality for spatial planning collaboration among the WFUA municipalities. Collaboration on spatial planning could take different forms, such as: information and experience sharing on a regular basis, institutionalization of the WFUA collaboration, joint spatial planning for the WFUA or among the municipalities, joint planning and delivery of transport network and services, organizing a WFUA technical support unit that could help with the technical aspects of drawing studiums and spatial plans, and the joint public procurement of services related to planning (data gathering, processing and analyses). Demonstrating professional competencies and robust data analyses could also increase the opportunities for the WFUA municipalities to successfully secure additional resources for the WFUA-wide infrastructure from national and European programs.

**The Steering Committee for the Włocławek Area of Strategic Intervention could be a suitable platform for future collaboration on the WFUA master plan.** Currently the WFUA is recognized by the Ministry of Investment and Development as an area of strategic intervention (or obszar strategicznej interwencji, OSI in Polish). OSIs were established to allow municipalities to take advantage of designated financing from the national and European resources. Contrary to integrated territorial investments (ITIs), which must have the institutionalized collaboration of participating municipalities to be eligible for obtaining ITI-specific resources, the OSIs are not required to be established as formalized institutions. Thus, the WFUA's OSI is an informal entity led by Włocławek City that holds somewhat regular meetings or convenes when decisions regarding joint OSI interventions are needed. The WFUA's OSI does not currently operate on the thematic area of strategic spatial planning. However, the stakeholders agreed that the existing OSI entity could serve as a base, and be expanded upon, for further and more frequent spatial collaboration.

**Overall, urban planning capacity has room for improvement amongst the WFUA municipalities, especially in the smaller ones.** Training or upskilling would contribute toward more effective urban development, planning and management. As mentioned previously, many of the smaller municipalities typically have only a single staff member (working full time or part time, or on a multi-tasking basis) tasked with urban planning and management. As such their in-depth planning knowledge tends to be low, and they are usually not conversant with GIS tools. Upskilling or training, both in terms of general urban planning and basic GIS knowledge, would see substantial improvements in their competencies to perform basic GIS functions, better use the Infostrada resources, as well as better understand and manage other planning functions. The Włocławek City's urban planning team that prepares the in-house studium and spatial plans, would also benefit from more advanced and targeted GIS and urban planning training.

**Local authorities welcomed the idea of a common or shared technical support unit.** Municipalities indicated that creating a small technical team of spatial planning and urban experts, who would provide technical support services to municipalities would be beneficial, especially for the smaller municipalities which face a more acute shortage of urban planning

staff and skills. Although the smaller municipalities outsource the formulation of the spatial plans and studiums, they would still welcome analytical and technical support to better plan their territory, utilize resources offered by the Infostrada system, and commission and guide planning tasks. This support could come on top of the training that the municipalities' urban planning staff needs.

**The municipalities also have a substantial need to upgrade their IT equipment (both hardware and software).** Local planners acknowledge that without proper computers and suitable software, they are not able to perform their tasks and to convert data to a digital format for recording, planning and processing. The current equipment available in municipal urban planning units is insufficient to read or edit planning files such as on a GIS platform, and poses a disconnect with accessing or using the Infostrada, even though it is an open resource. The WFUA municipalities welcome opportunities to upgrade both hardware and software. It will be useful to jointly decide on a single software standard for the whole WFUA, in order to lay the foundation for the future joint master plan, and leverage their joint purchasing power to bring procurement costs down. While selecting the spatial planning software, the municipalities should consider acquiring open source software to reduce costs, although the purchase of proprietary software to read, access and edit technical engineering and planning documents may also be needed.

# **KEY RECOMMENDATIONS, CONCLUSIONS AND NEXT STEPS**

The following table summarizes the key recommendations, next steps and potential timeframe, in the categories of: (i) spatial/urban planning, (ii) capacity building, and (iii) institutional strengthening. (In terms of the time frame, short term is around one to five years, medium term is five to ten years, and long term is anything beyond ten years.)

**TABLE 6 Key recommendations**

Key Recommendations	Comments	Leading and Responsible Party(ies) for Action	Potential Timeframe		
			Short	Medium	Long
<b>Spatial/Urban Planning</b>					
WFUA Concept of Spatial Development or master plan.	This is essential for charting and coordinating planning and development decisions across the boundaries of municipalities and to ensure the optimization of shared resources (for example, the water reservoir on the Vistula River) across the WFUA for the greater good of the WFUA. Furthermore, this could help to create a joint brand that could be used in the WFUA's marketing strategy.	MO, OSRP, and contribution by all the municipalities	✓	✓	
Review spatial planning laws and regulations; provide guidance to share best practices for drafting the studiums and spatial plans		National level relevant agencies			✓
Expand coverage and preparation of the spatial plans, especially for the strategic areas, in line with the prepared WFUA development concept		Relevant municipalities	✓	✓	
Update the studiums where required, in line with the prepared WFUA development concept		Relevant municipalities	✓	✓	
Move toward development based on proper planning (spatial plans) rather than based on ad hoc individual administrative decisions on the terms of development (warunki zabudowy in Polish)		Relevant municipalities	✓	✓	✓
Further improvements to the Infostrada. For example, input and updating data, help desk support, and allowing information to be publicly available		MO, OSRP, contribution by all the municipalities	✓	✓	
Coordinate development choices and decisions for implementation (such as the location and nature of strategic areas) among the WFUA municipalities, to establish a balance between advancing the WFUA goals and guarding the individual municipality's needs		MO, OSRP, contribution by all municipalities	✓	✓	✓

Take joint actions (as the WFUA) on preparing the WFUA's strategic areas for development, for example, joint requests to the Ministry of Agriculture to 'de-farm' land plots that are key for the WFUA's development, or the creation of a WFUA brand for potential investors		All municipalities	✓	✓	✓
Adequately consider the constraints and development restrictions in planning and development options and decisions		All municipalities	✓	✓	✓
Leverage quantitative data to inform decisions on the provision of public facilities; coordinate among the municipalities, where possible		All municipalities	✓	✓	✓
<b>Capacity Building</b>					
Set up a WFUA technical support unit as a shared or common resource pool on urban and spatial planning	This unit could potentially support digitization and the updating of the municipalities' planning documents; the maintenance and support of the municipalities to coordinate/reconcile individual planning documents with the WFUA spatial development strategy when prepared; and other functions	MO, OSRP, contribution by all municipalities	✓	✓	
Improving staff strength/allocating staff for urban planning and management function		All municipalities	✓	✓	
Training/upskilling on GIS		All municipalities	✓	✓	
Training/upskilling on specific areas of urban planning and management		All municipalities	✓	✓	
Upgrade urban planning and management systems to move toward paperless administration	The city of Kielce, Poland demonstrates best practices of how a city can develop such a system	All municipalities	✓	✓	✓
Upgrade IT equipment (both hardware and software) for effective and efficient performance of functions; leverage low-cost open source tools where applicable	An instance of an open source GIS solution is currently being developed by the Bank for the Presov Region of the Slovak Republic, under the Slovak Republic Catching-up Regions Initiative	All municipalities	✓	✓	
Program and provide potential support and resources to expand capacity building efforts.		MO with National level agencies and EU	✓	✓	✓
<b>Institutional Strengthening</b>					
Set up a regular collaboration platform and dialogues for spatial planning collaboration; explore leveraging the Steering Committee for the Włocławek Area of Strategic Intervention	Poland has multiple examples of ITI associations that could serve as a reference point, some are composed only of associated municipalities, some include the Marshal's Office as a participant.	MO, OSRP, or all municipalities	✓	✓	
Secure additional resources for the WFUA-wide infrastructure from national and European programs		MO, OSRP, contribution by all municipalities, with National level agencies and EU	✓	✓	✓
Continue to facilitate collaboration and institutional strengthening efforts, through objective third party.		MO with National level agencies and EU	✓	✓	✓

Source: Authors' analysis

## ANNEX 1

# SPATIAL ANALYSIS METHODOLOGY

**1. DEVELOPMENT RESTRICTIONS/COMPATIBILITY OF LAND USE**—acts as a negative filter that excludes certain plots from development or identifies incompatible land use. Factors considered include: natural conservation areas, flooding risks, landslide risks, national security areas, buffer zones of strategic/major utilities/infrastructure, and arable land with level I-III soil quality categories (except in urban areas) and so on.

**Four main categories of development restrictions are examined and described as below:**

**Category 1: Areas exposed to natural and/or industrial risks**, including:

- a. Flood risk (Note: The flood hazard map for Europe with a 100-year return period was used, with some manual interventions [filtering, smoothing, and so on])
- b. Landslide risk (Note: land plots with a mean slope above 15 degrees are considered as restricted, taking into account both the stability of the territory and the high costs for construction in these areas)
- c. Earthquakes (not applicable)
- d. Other risks (not applicable)

**Category 2: Areas requiring protection**, including:

- natural protected areas (defined at national level)
- forests

(Note: While areas covered with forests are not entirely restricted from development and legally some degree of development may be allowed except in specific cases where special regulations may apply. However, the general principle is to protect and preserve forested areas.

Further, the forested areas are not represented as separate polygons on a layer due to these technical issues: (i) in the official land use (per parcel) layer, many “forest” areas are erroneously attributed (both false positive and false negative); (ii) some parcels have multiple land use attributes for one single parcel (e.g. housing & forests), (iii) if other sources were to be used, such as open source maps, the boundary accuracy does not fit perfectly with the other layers.)

**Category 3: Areas with land uses that are not subject to analysis**, including:

- already developed areas (e.g. those which have existing residential buildings, with the assumption that no major interventions are necessary)
- industrial areas (Note: The assumption here is that the functionality of industrial areas is to remain.)
- land plots representing roads, railways, waters, etc.

**Category 4: Areas with special regulatory situations**, including:

- arable land with a I-III soil quality (except the urban areas) (Note: There are two version of the analysis, one in which the arable land I-III was considered a restriction and one which does not.)

The land plots database is used as the basis for the analysis. The characteristics of each land plot is recorded in the attribute table by spatial intersections (i.e. for each plot, the fields for each type of restriction will be marked with 1 or 0 (yes or no)). Collating the information, a general field reflecting restricted or not restricted is tabulated.

**2. DEVELOPMENT SUITABILITY ANALYSIS**—categorizes land plots into five bands (already developed or restricted, low, medium, high, and very high suitability) according to their potential for development. The factors considered and weighed include: the plot size, distance to city center, proximity to existing or planned main roads, parcel shape and ownership. A further layer of restrictions (mainly derived from the first analysis) was overlaid to present a more complete picture of development suitability.

**Parameters adopted in the analysis and their associated weightages:**

**1. Distance from city center** (weight 30%):

- < 5 kilometers → 10 points
- 5-15 kilometers → 6 points
- > 15 kilometers → 3 points

(Note: A GIS calculation algorithm was used to calculate the distance between the center of each land plot and the center of Włocławek City)

**2. Proximity to an existing or planned main road** (weight 30%):

- < 1 kilometer → 10 points
- 1-2 kilometers → 6 points
- > 2 kilometers → 3 points

(Note: A GIS calculation algorithm was used to calculate the proximity of each land plot to all the main roads, being an indicator of accessibility)

**3. Size of plot** (weight 15%):

- 5 hectares → 10 points
- 0.5-5 hectares → 6 points
- < 0.5 hectares → 3 points

(Note: A GIS calculation algorithm was used to calculate the area for each land plot, based on Poland's national coordinate system)

**4. Ownership index** (weight 15%):

- > 0.75 → 10 points
- 0.5-0.75 → 6 points
- < 0.5 → 3 points

(Note: This indicator classifies the type of property on a scale of 0 to 1. Higher values indicate that the land is owned by the state (public), and the smaller values indicate that the land is privately owned)

**5. Parcel Shape Index** (weight 10%):

- > 0.75 → 10 points
- 0.5-0.75 → 6 points
- 0-0.5 → 3 points

$$\text{Shape regularity index} = 16 \times \text{plot area} / (\text{plot perimeter})^2$$

(Note: A parcel shape index was used to lower the score for the 'long and narrow' land plots, and to eliminate the land plots that have erroneously attributed land use [roads, railways, rivers, canals, and so on])

**By using a weighted formula, a suitability for development score was calculated for each land plot in the database, divided into the following classes:**

- < 4 points - Low suitability
- 4-6 points - Medium suitability
- 6-8 points - High suitability
- > 8 points - Very high suitability

**Restrictive factors or areas with special regulatory conditions:**

- a. Flood-risk areas
- b. Landslide-risk areas: plots with a mean slope above 15 degrees
- c. Forests and natural protected areas
- d. Arable land with a I - III soil quality (except the urban areas)
- e. Already developed land plots (with buildings)
- f. Industrial areas

**Land use classification and inclusion in the analysis**

Land Use\Cover	Suitable for the Analysis	Land Use\Cover	Suitable for the Analysis
Agricultural land, forest and buildings	No	Mining	No
Arable land	Yes	Orchard	Yes
Arable land and buildings	Yes	Orchard and arable land	Yes
Bush	Yes	Orchard and meadow	Yes
Bush and arable land	Yes	Orchard and pasture	Yes
Bush and arable land and meadow	Yes	Other buildings	No
Bush and arable land and pasture	Yes	Other transport	No
Bush and meadow	Yes	Others	Yes
Bush and pasture	Yes	Pasture	Yes
Ditch	No	Pasture and buildings	Yes
Ditch and arable land	No	Planned road or railway	No
Ditch and meadow	No	Pond	No
Ecological wasteland	Yes	Pond and arable land	No
Forest	No	Pond and meadow	No
Housing	No	Pond and pasture	No
Housing and arable land	No	Railway	No
Housing and forest	No	Recreation	No
Housing and pasture	No	River	No
Industrial	No	Road	No
Lake	No	Urbanized area not built up	Yes
Meadow	Yes	Wasteland	Yes
Meadow and buildings	No		

**Data limitations and assumptions:**

1. Land plot data containing erroneously attributed land use (for example, roads that are registered as arable land, and others)
2. Parcel database contains 'sliver polygons'
3. Road network data is not very accurate in terms of road classification (however, this is the best available data)
4. Parcel shape index has both advantages (for example, it eliminates parcels with very elongated and narrow shapes, such as roads, that are not properly classified), and disadvantages (for example, there are many narrow plots positioned next to each other that could potentially be consolidated or pooled and thus be suitable for development). Therefore, the weightage for this factor was low at 10%

**3. PUBLIC FACILITIES AND AMENITIES PROVISION AND GAPS**—identifies the existing coverage and gaps in the public facilities and amenities' provision (specifically for clinics [2,000 meter radius], kindergartens [500 meter radius] and primary schools [1,000 meter radius]).

**Levels of territorial units used in the analysis:**

- a. Settlement
- b. Municipality

**Other spatial database used in the analysis:**

- a. Buildings with estimated population
- b. location of medical centers, kindergartens and primary schools (from 2016 data through a MO project)

**Step 1.** Process GIS databases at the settlement and municipality level, and add attribute data, such as: population, number of buildings, and so on

**Step 2.** Generate the areas of accessibility for each type of public facility, based on standardized distances:

- a. Kindergarten—500 meters
- b. Primary school—1,000 meters
- c. Basic clinics—2,000 meters

**Step 3.** Calculate the statistics for each level of the analysis, based on spatial queries (spatial statistics), such as: the number or share of the population within/without the accessibility area, number of buildings which are within/without the standardized distance area; and calculate the distance from each building, with the associated population, to different types of public facility

**Step 4.** Generate a raster dataset that represents the inverse distance from each type of public facility, that covers the entire territory studied

**Step 5.** Develop maps and statistical databases based on the results

**4. IDENTIFICATION OF STRATEGIC DEVELOPMENT AREAS**—guides municipalities to consider various factors (for example, economic, social, environment, infrastructure, development objectives, and others) through a facilitated and qualitative exercise to identify and prioritize strategic development areas within their jurisdiction. The location, primary function and intention of these identified areas are then compiled and presented to the WFUA to facilitate better coordination and collaboration among the municipalities.

**Worksheet tool used for qualitative evaluation.** Rate each potential area under consideration against the factors and development objectives on a scale of 1 to 5.

1—low, 3—medium, 5—high

Considerations for Identifying Strategic Areas for Further Detailed Planning/Development.	Potential Strategic Area				
	For example: Downtown (name)	For example: Waterfront	Area 3	Area 4	Area 5
Economic	Concentration of businesses	5	2		
	Provide employment	5	2		
	Proximity to other economic centers/areas	4	4		
Infrastructure	Ease of connectivity and accessibility	5	4		
	• pedestrian	3	4		
	• vehicular	4	4		
	• public transit	4	3		
	Availability of river transport	1	5		
	Proximity to key infrastructure (for example: train station, stadium, and others)	4	3		
	Availability of land/parcel/soft stock	2	3		
	Proximity to Włocławek reservoir	2	4		
Social	Population catchment nearby	3	4		
	Presence of unique characteristics/ assets (for example: religious institutions, public art, museums, natural landscapes, gathering places, and historic buildings)	4	4		
	Presence of community network	3	3		
Environment	Environmentally non-sensitive area (for example: not a nature reserve, no endangered species)	4	2		
	Low risks from environmental hazards (for example: landslides, floods)	3	2		
	Proximity and connectivity to environmentally sensitive areas	2	3		
Opportunities/ Objectives	Potential for enhancing the quality of life	4	5		
	Potential for economic growth or to create economic impact and synergies	5	4		
	Potential for employment generation	5	3		
	Potential for improving social inclusion	4	5		
	Potential to address climate change impacts	3	5		
	Potential to contribute to a green energy region and market	3	3		
<b>TOTAL</b>		<b>82</b>	<b>81</b>		

Other Considerations		Potential Strategic Area				
		For example: Downtown (name)	For example: Waterfront	Area 3	Area 4	Area 5
Beneficiaries	Residents and citizens	Y	Y			
	Private sector	Y	Y			
	Tourists and visitors	Y	Y			
	Low-income and vulnerable groups	N	Y			
	Middle-high income groups	Y	Y			
Potential development modality	Conservation	Y	Y			
	Regeneration	Y	N			
	New development	Y	Y			
Timeframe	Short term (within 5 years)	Y	N			
	Medium term (5-10 years)	Y	Y			
	Long term (> 10 years)	Y	Y			
Information Sources	Previous and current strategic or spatial plans					
	Stakeholder consultation and workshops					

### Steps for using the worksheet:

- Each municipality can think about what areas within their jurisdiction are to be considered as strategic development areas, and merit further detailed planning, design and development.
- The municipality can identify a long list of areas which they want to consider if they are strategic, and merit further detailed planning, design or development. Fill each area across the row.
- For each identified area, go down vertically and rate the area against each of the consideration based on local knowledge. There will be room for adjustment later!
- Next, go across horizontally for each consideration to determine if the rating is logical across the different 'areas.'
- Once the excel sheet is completed for each municipality, the municipality can further prioritize the long list of strategic areas.
- In the final analysis, the identified areas for each municipality will be consolidated to identify the strategic areas for the WFUA, as well as areas which require further coordination or synergy.

## ANNEX 5

# PLANNING CAPACITY-BUILDING NEEDS SURVEY FORM FOR THE MUNICIPALITIES AND SUMMARY RESPONSES



## PLANNING CAPACITY BUILDING NEEDS SURVEY

### Key Data

Name of Gmina: \_\_\_\_\_

Number of staff in urban planning department: \_\_\_\_\_

Full time: \_\_\_\_\_ Part time: \_\_\_\_\_

When was the Studium last updated, and validity period: \_\_\_\_\_

When is the next Studium update planned: \_\_\_\_\_

On average, how many building permits were issued per year, in the last 5 years: \_\_\_\_\_

### Capacity Building Needs

#### *Centralized capacity building support*

1. Do you think centralized capacity building support, such as a centralized pool of urban planning, or GIS specialists, would be useful to your Gmina? This could be a unit at the WFUA level or at the regional level.

Yes  No

2. Any suggestions for what you would like to have provided in a centralized support model, and how?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*Targeted capacity building support for individual Gmina*

3. Which of the following types of capacity building support do you wish to receive? For each, please elaborate on specific needs and quantify wherever possible.

- Training (please elaborate on types of training, and potential number of people requiring training)

---

---

---

---

- Technical Assistance Support (please elaborate on types of technical assistance support eg. technical assistance on elaborating studium or detailed spatial plans etc.)

---

---

---

---

- Equipment (please elaborate on types of equipment eg. software or hardware and quantify/ specify where possible.)

---

---

---

---

**Thank you!**

## Summary Responses to Planning Capacity-Building Needs Survey (Translated and Verbatim)

Municipalities	Current Staffing	Studium last update	Next planned update	Average building permits issued per year (in last 5 years)	Centralized Support	Comments
Kowal	Full time: 2 1 person—sub-inspector for construction and promotion of the municipality 1 person—manager of the Office for Investments, Construction and Municipal Management	Study – Resolution No. XIV/66/2000 of 08.02.2000, not updated	2018 (overdue)	277 decisions on conditions for construction issued, 28 decisions on location of public benefit investment	Yes	<ul style="list-style-type: none"> <li>It would be good if the unit was located fairly close to the area it would be serving (knowledge of the territory and the issues, easy contact)</li> </ul>
Lubanie	Part time: 2 persons	2006	2019	Approximately 30	Yes	<ul style="list-style-type: none"> <li>Centralized platform on the level of WOF, not higher. PiK Infostrada could be used (voivodeship level), but for data presentation rather than actual work on WOF area.</li> <li>Substantive support with respect to entering the data into the platform (or a person, who will be dealing with it, based on data sent by municipalities)</li> <li>In accordance with information presented during the meeting: OSI structure could be used; a source of financing will be needed—a full-time position for a person operating the platform</li> </ul>
Brześć Kujawski	Full time: 1 person; Part time: 1 person	September 2009 / open-ended	NA	120	Yes	No suggestions
Fabianki	Full time: 1 person	June 14, 2000	2019-2020	50	Yes	<ul style="list-style-type: none"> <li>Training and advice in scope of spatial planning, preparing the Study and spatial development plans</li> </ul>
Włocławek	Full time: 2 person 1 person—Specialist for construction, environmental protection, also dealing with decisions on conditions for construction 1 person—Specialist for real estate management and economic activity, also dealing with issues related to spatial planning (servicing created local zoning plans, study, issuing information, excerpts, drawings)	2000	2020	On average, 102 construction permits. Number of decisions on conditions for construction issued: 138 on average	Yes	<ul style="list-style-type: none"> <li>It would be good if the unit was located fairly close to the area it would be serving (knowledge of the territory and the issues, easy contact).</li> </ul>
Włocławek City	Full time: 8 persons + 1 manager in Spatial Planning Office within the Urban Planning and Architecture Department	Resolution No. 103 / XI / 2007 of Włocławek City Council of 29 October 2007	Work is ongoing on amendments to the Study, as per Resolution No. XL / 19 / 2014 of Włocławek City Council of 17 March 2014	On average, in 2014-2018—451/year (2014—446, 2015—505, 2016—401, 2017—438, 2018—466, 2019 (as of the day of the survey)—126)	Yes	<ul style="list-style-type: none"> <li>Separate office for technical support of WFUA, financed from technical assistance funds (servicing common needs—OSI design, spatial planning, cooperation between OSI municipalities).</li> </ul>

### Training Needs

- General training on spatial planning (current regulations, types of documents, relationship between those documents, preparation procedures, requirements with respect to bidders in procurement of planning studies)
- Training on using the Infostrada
- Training on QGIS
- It would be advisable to train 2 line employees and 1 person in charge of IT support for the municipality

- Regulations in scope of planning, including decision on conditions for construction and limitations pertaining to constructed structures - 2 persons
- Using the software (e.g. QGIS) on a basic level, data exchange standards - 2 persons

- Use of graphic software—2 persons
- Training on spatial planning and real estate management—2 persons

- Training on the procedures for adopting the the Study and spatial development plans (1-2 persons)

- General training on spatial planning (current regulations, types of documents, relationship between those documents, preparation procedures, requirements with respect to bidders in procurement of planning studies)
- Training on using the Infostrada
- Training on QGIS
- It would be advisable to train 2 line employees and 1 person in charge of IT support for the municipality

- For creating local zoning plans in Qgis software—8/9 persons
- For creating the register of land for development (for the study)—2/3 persons

### Technical Assistance Support Needs

- Help in documents preparation procedure (deadlines, list of institutions, formal and legal documentation, etc.)
- On currently applicable legislation, jurisprudence, interpretations etc.
- To solve social conflicts (including with respect to determining the conditions for construction)
- On consulting other planning documents, prepared by other entities (e.g. neighboring municipalities, region)

- Substantive assistance—as external informal control/audit—e.g. before publicizing the study and sending it out for consultations
- Assistance in using the software, contact with specialists
- Quality control on technical aspects of studies (e.g. possibility of placing on the platform, data standard, etc.)

- Technical support in developing the Amended Study of Development Conditions and Directions

- Substantive and technical assistance on developing the the Study and spatial development plans

- Help in documents preparation procedure (deadlines, list of institutions, formal and legal documentation, etc.)
- On currently applicable legislation, jurisprudence, interpretations etc.
- To solve social conflicts (including with respect to determining the conditions for construction)
- On consulting other planning documents, prepared by other entities (e.g. neighboring municipalities, region)

- On development strategies, including strategy for city/municipality development, OSI development strategy
- For creating the register of land for development (for the study)

### Equipment Needs

- We are lacking a printer for large formats, as well as specialized software for opening map attachments, editing them, access to map portals

- This is always welcome; GIS software (freeware), same across entire WOF or compatible. Computers (and monitors!) enabling uninterrupted work. Also, possibility of purchasing licenses for software not directly related to GIS, but are being used for current work—e.g. MS Office version no older than one year—for descriptive and analytical portions of planning documents.
- As of the day of the survey—2 workstations for 2 persons, but it could also be one workstation, treated as external, “connected” to the platform.
- Color printer, A3 format, or, in “rich” version, a multi-purpose device (photocopier, scanner, printer). Could be just one device, operating within the network.

- No needs.

- Software—1 workstation supporting spatial planning
- Computer capable of opening large files

- 2 computers with better parameters than the current ones, 2 large monitors, printer for large formats

- GEOMEDIA software—current licenses (+support)—8 persons

## ANNEX 5

# POTENTIAL CAPACITY BUILDING NEED ESTIMATES

Estimated costs for elaborating plans

The estimated costs for elaborating plans are broadly:

- Gross price for a Studium project between 50 000 and 80 000 zł.
- Gross price for local plans up to 10ha between 8 000 and 15 000 zł
- Gross price for local plans above 10ha between 10 000 and 40 000 zł.

The above estimates assume that:

- The plans are to be developed by local consultants.
- The estimated timeframe are:
  - approximately 18 months for a studium update
  - approximately 12 months for a local plan without changing of land status (such as from arable land)
  - approximately 24 months for local plans with change in land status

It is important to note that the costs of elaborating plans can vary widely, and the above is a very rough estimate. The other factors for consideration include: the level of detail required, types of consultant and size of the team, amount of ready information or data available, administrative procedures in individual municipalities, locational differences across the country and so on.

## Training and equipment estimate

Based on the capacity building needs assessment survey results received from the WFUA municipalities, many have requested for GIS training, as well as support for equipment such as computer and printers. As a reference, the table below provides rough cost estimates for these items. The costs vary widely depending on actual providers, format, duration, number of people, details and depth of course, specification of equipment and so on.

## Training and equipment need estimate

	Item	Number of Attendee	Training Costs (EUR)	Duration	Assumption	Remarks
1a	Basic GIS training (Group)	Around 4-8 people	5,000 – 6,500	5 days	<ul style="list-style-type: none"> <li>- Trainers are invited to the city. (This assumes delivery by a Polish company.)</li> <li>- For participants without any prior GIS knowledge</li> <li>- Travel costs are not included.</li> <li>- Price does not depend on actual number of participants (although an upper limit may be set depending on the trainer).</li> </ul>	<p>Different prices could be charged for QGIS and ArcGIS trainings.</p> <p>Sample GIS courses:</p> <ul style="list-style-type: none"> <li>- by QGIS <a href="https://gis-support.pl/szkolenia-gis/">https://gis-support.pl/szkolenia-gis/</a></li> <li>- by ESRI <a href="https://www.esri.pl/katalog-szkolen/">https://www.esri.pl/katalog-szkolen/</a></li> </ul>
1b	Advanced GIS training (Group)	Around 4-8 people	6,500-7,500	5 days		
1c	Basic GIS training (Individual)	1	1,500-2,000	5 days	<ul style="list-style-type: none"> <li>- Individual participants are sent to attend external training.</li> <li>- For participants without any prior GIS knowledge</li> <li>- Travel costs are not included.</li> </ul>	
2	Computer	1	900-1400		<ul style="list-style-type: none"> <li>- Intel i7 or equivalent processor</li> <li>- 16 GB RAM</li> <li>- 120 GB SSD and 1+ TB hard drive</li> <li>GPU with 1 GB RAM</li> </ul>	- For example, Dell Inspiron Desktop or Dell Precision 3630 Tower
3	Plotter (Large-format printers)	1	2,200 – 2,7000		- 36-inch printer (allow A1 size printing)	- For example, HP Designjet T520
4	ArcGIS license	1	4,000			Desktop license without time limit. (This could change, as ESRI is introducing a new pricing policy.)
5	QGIS license	1	0			QGIS is an Open Source Geographic GIS licensed under the General Public License.

# NOTES

1. Studiums are similar to master plans for the local municipality, and provide conditions and directions for spatial planning, general function and land use. However, they are not legally binding.
2. Gmina Włocławek City, Gmina Brześć Kujawski, Gmina Choceń, Gmina Fabianki, Gmina Kowal, Gmina Lubanie, Gmina Włocławek and Gmina Kowal City.
3. Local spatial plans are similar to local development plans or detailed plans, typically prepared for a small area or specific parcels. They are legally-binding. The coverage of local spatial plans is low; some 70 per cent of the country's territory is not covered with spatial plans. The lack of local spatial plans is a critical challenge in itself, as the municipalities then lack the required instrument to provide objective and consistent planning decisions or enable effective development control and enforcement. This further affects the municipality's ability to attract and facilitate private sector investments.
4. The Concept for Spatial Development could be envisioned loosely as a master plan. However, there is no specific legislated equivalent, hence no formal terminology for the plan.
5. Voivodship is Polish, similar to regions.
6. A new regional spatial plan is under preparation.
7. More specifically: "Ustawa o planowaniu i zagospodarowaniu przestrzennym z dnia 27 marca 2003r. (art. 9)" for studiums; and "Ustawa o planowaniu i zagospodarowaniu przestrzennym z dnia 27 marca 2003r." for local spatial plans.
8. For instance, one municipality may use yellow to depict residential areas, while another municipality may use yellow to indicate industrial areas; another example is the lack of standards for marking object on the maps.
9. During interviews, some municipalities indicated that there is a risk that landowners will sue a municipality for compensation for the depreciation of their land value due to the spatial plan stipulations. For instance, if a road or other public facilities are planned on a plot, the development value will decrease.
10. The analysis was unable to locate or disaggregate for the locations of the school-age appropriate population, and hence this analysis is taking into account all of the population within the WFUA.

