GOŁDAP – A SMALL BORDER TOWN

JAN MACIEJ CHMIELEWSKI, AGNIESZKA KARDAŚ

The town's history

Border towns always have a specific character in that they reflect diverse relationships between the bordering countries. In spatial structure, these can manifest themselves through defensive forms if there is a threat of international conflict, or friendly forms if cooperation between the bordering countries is enhanced by trade, tourism and culture. The example of Gołdap illustrates how the changing conditions affected the directions of its urban sprawl and the patterns of its spatial development.

After the signing of the Treaty of Melno in 1422, the frontiers of three countries: the Duchy of Prussia, the Grand Duchy of Lithuania and the Kingdom of Poland, met in the vicinity of today's town of Gołdap. The key factor behind the incorporation of Goldap in 1570 was its border location. The intention was for the town to contribute to the economic growth of the border zone. It was to focus on trade between the neighbouring countries, two of which were mutually bound, at the time of its founding, with a union, while Prussia was under Polish vassalage. It was established by Albrecht Frederick, the Duke of Prussia, who in its incorporation charter¹ gave the town the name of Goldap².

The town charter (privilege of tle location) endowed Gołdap with a large area of approximately 2735 ha (157 włóka, 22 morga and 157 ¾ pręt, i.e³). Only a small part of this area (7.5 włóka) was allocated for the town itself, and the rest was left as forest and farm land. The town was built on a rectangular plan, with a large marketplace and two principal streets connected with perpendicular ones. All of it was probably surrounded with a stockade with four gates in it. On the slope facing the river there was a church, and in the following years a school and a hospital were added. ⁴ (Fig. 1).

In modern times Gołdap repeatedly experienced fires and plagues, as well as pillage and destruction by war. In 1719, a border garrison was stationed there, in barracks built for it near the town. The town gradually evolved from a farming town into a centre of agriculture-related crafts and commerce, which had an invigorating effect on the underdeveloped neigbouring border territories. The town attracted merchants and suppliers of agricultural produce, especially cattle, not only from the surrounding villages but also from further afield.⁵ Another characteristic feature was immigration from the neighboring countries. Besides Germans, the town had large groups of Polish, Lithuanian and Jewish population.

An important event in the history of the town was the Prussian administrative reform of 1818, which promoted Goldap to the rank of Landkreis (county) town. This improved the town's position and contributed to its fast economic growth. The construction of the Königsberg-Lyck (today Ełk) railway line in 1879 and subsequently of other rail links gave Goldap an important railway junction. It gained a direct connection with the capital of East Prussia and indirectly with Rastenburg (today Ketrzyn), Allenstein (today Olsztyn) and Berlin. The development of rail routes in the twentieth century was of strategic military significance, as it linked the Prussian garrisons along the Russian border. (Fig. 2). Impressive viaducts from that time in nearby Stańczyki, Kiepojcie and Botkuny are still in evidence today (Fig. 3). The town and its environs, surrounded by the Romincka Forest (German: Rominter Heide) and Szeskie Hills (Seesker Höhen) and by lakes and game-rich forests, attracted hunters from the elites of the time, including Kaiser Wilhelm II; this raised the standing of Goldap among the other Prussian towns.6

¹ J. Kopciał, Goldap i okolice, Suwałki 1995.

² In the Polish language, the name poses many problems with its declension, as it belongs to a group of inherited or borrowed words. It is often mistakenly assumed to be of the masculine gender, while in fact it is feminine as it was derived from the name of the local river (rivers and lakes having feminine names in Polish). A. Kubiak-Sokół, *Słownik nazw miejscowości i mieszkańców*, R. 2007.

³ "włóka", "morga", "pręt" – measures the surface used in Poland in the Middle Ages.

⁴ J. Słoma, *Jak powstała Goldap*, R. 2011; J. Kopciał, *Goldap i okolice*, Suwałki 1995.

⁵ J. Kopciał, Goldap i okolice, Suwałki 1995.

⁶ J. Kopciał, *Goldap i okolice*, Suwałki 1995; D. Zeigert, *Verschwundene Gleise, Die Kaiserbahn Goldap – Szittkehmen*, Gołdap 2011; J. Kurkowska-Ciechańska, A. Ciechańska, *Linia kolejowa Botkuny – Żytkiejmy*, R. 2012.

At the beginning of World War I, Goldap was occupied by Russian troops, which were stationed there until 1915. During that time, 91 of the town's buildings were ruined together with numerous workshops, including all the buildings in and around the marketplace (Fig. 4). Work on rebuilding them began soon after the retreat of the Russian army, when the ruined Prussian towns were included in the state programme of reconstruction. Zoning plans were prepared and even some standard architectural solutions for burgher houses were designed. In Goldap, the greatest emphasis was on the area of the marketplace, where new public buildings were erected: the church, town hall, court, jail, post office, fire station, and a green area was established. Twostorey houses were built around the marketplace, some with arcades (Fig. 5). In the area near the railway station factories were located, and in the 1930s the construction of a residential suburb began. To the south, in the area near the barracks, both public buildings and residential housing were located. One of the streets coming out of the marketplace, at the point where it forked out, gained a square, with the Kreishaus (county-seat building) forming its southern wall, on which the town park was arranged. Different parts of the town were connected with new roads lined with trees. New service utilities and recreation and sports facilities appeared. The town received mains electrity and a sewerage system⁷. (Fig. 6)

In the interwar decades Gołdap became more attractive to tourists. Visitors were drawn to the lake and leisure facilities situated around it. Not far from the town, on the highest hill called "Beautiful Mountain", opportunities for skiing and sail-gliding were created.⁸ Before World War II, the army garrison in Gołdap was enlarged.

During the Second World War, it was not until the end of 1944 that the fighting reached Gołdap. The town changed hands several times. At the beginning of 1945 it was occupied by the Red Army, and in March of the same year it was handed over to the Polish authorities. The great destruction of that period, as well as the ensuing socio-political and economic

change, undermined Goldap's growth potential and transformed its appearance. It is estimated that 90 per cent of its built fabric was lost. Many areas were full of land mines and off limits. The railway line was dismantled. The town's technical infrastructure required extensive repairs. The residents of Goldap had either died during the war or were subject to the displacement programme.9 Begun in August 1946, the deportation of the German population from what was then the District of Mazury lasted until 1947. Its aim was to strengthen the Polish character of the "recovered territories". In the first transport from Goldap, 1430 out of the planned 1574 residents were transferred. The Germans who chose to stay on worked for starvation rations at reconstruction or as farm labour.10

The population of Gołdap was reduced from over 12,000 (in 1939) to mere 632 inhabitants. After the war, the number was rising slowly to reach the prewar level as late as in the 1970s and has since remained at about 13,000 inhabitants. New settlers migrated into the town mostly from the nearby provinces, mainly from the Province [voivodeship] of Białystok, but also from the eastern areas of the former Republic of Poland. They settled here to find jobs in a local brick factory, flour mill or in logging or gravel mining.

The new frontier demarcated under the Potsdam Agreement, which divided East Prussia into two parts, left some of the prewar territory of the Goldap Kreiss on the Soviet Union's side. In 1946 Goldap was incorporated into the Bialystok voivodeship while remaining the seat of a truncated county.

Reconstruction began immediately after the war, at the initiative of the new residents and local authorities. The reconstruction projects had a great impact on the spatial structure and economic position of the town. The work started from key administrative buildings and amenities such as hospital and school, to be followed by rebuilding and development of housing. The first residential buildings were not completed until the late 1960s. The marketplace, long after the war. remained a pile of rubble. It was only in the 1970s and '80s that five-storey blocks

⁷ J. Kopciał, *Goldap i okolice*, Suwałki 1995; Local Information Database maintained by the Public Library of Gołdap; M. Siuchniński, *Miasta polskie w Tysiącleciu*, vol. 1, Wrocław 1965

⁸ J. Kopciał, Goldap i okolice, Suwałki 1995; Local Information Database maintained by the Public Library of Goldap.

⁹ J. Kopciał, *Goldap i okolice*, Suwałki 1995; Local Information Database maintained by the Public Library of Goldap.

¹⁰ A. Kostrzewa, Niemcy na Warmii i Mazurach w 1945 roku, R. 2012.

¹¹ Local Database; M. Klimczyk, *Statystyka miast i osiedli, 1945-1965*, Warszawa 1967.

¹² J. Kopciał, *Goldap i okolice*, Suwałki 1995.

of flats of standardised design were built, using the large-panel prefab system (Fig. 7). During the rebuilding, efforts were made to preserve the historic street grid, but the rows of new buildings were often wider apart. The original parcelling of land was not preserved, hence Goldap lost its historic small-town character, and its significance as a provider of services and a commercial, political and tourist centre was diminished. The scope of services it offered was small and limited to meeting the basic needs of the residents. Thus the town's pulling power was limited to the immediate surrounding area. The local trades and handicrafts were not reborn. The structure of land-ownership changed, as did the spacial structure, while the residents for a long time felt like temporary tenants in a town with which they were not linked either with tradition or history. In the 1950s, a majority of the population were employed on the nearby state farms of Jabramowo, Gołdap II, Rostek, Niedrzwica, and others.

Economic factors affecting Goldap's growth

In the 1960s, it was recalled that before the war Gołdap had played the function of a spa. The local climate properties and mineral waters were examined, and the presence of peat deposits that could be used as the source of peloids was verified. Studies confirmed their theraputic properties, and investments associated with spa and recreational functions were started. Soon the first holiday homes, hotels, guest houses and bungalows appeared, located mainly around Lake Gołdap. Consequently, in the early 1980s, Gołdap was classified as a town with spa potential and in 2000, as a result of many years' efforts, the municipality obtained the status of a spa¹³ (Fig. 8).

In 1975, as a result of Poland's administrative reform, *powiats* (administrative units roughly equivalent to counties) were abolished and the so-called small voivodeships were introduced. Gołdap was included in the Voivodeship of Suwałki. This change was not favorable. The town lost its importance as the seat of the county and preserved

only a handful of its higher-order services. All of the key institutions, such as court of law or hospital, were moved to Olecko. The Suwalki voivodeship was one of the poorest in the country and could only afford meager financial support for the town, which led to numerous protests, demonstrations, and even strikes. Only the restoration of local self-government after the political transformation strengthened the position of Goldap. The town gained greater powers to decide about its own affairs. In 1989, the local authorities prepared a development strategy taking into account the town's tourist and spa function; under it, unprofitable and polluting state-owned enterprises were closed down, and in their place private companies operating in free market realities were encouraged.14

The administrative reform of 1999 restored the territorial units of *powiat* (county). As a result, the Powiat of Olecko and Gołdap was created, which was divided only in 2002. Gołdap then regained its status as county seat, and this time it was included in the newly created Voivodeship of Warmia and Mazury.

In parallel with the function of a spa and tourist centre, the local authorities perceived the importance of the town's border location and the potential benefits of the revival of its economic relations with Kaliningrad. As a result of talks, in 1995 the "Goldap - Gusev" border crossing was opened and approved for tourist and cyclist traffic. The fastest increase, however, was in cargo traffic, although movement was restricted to vehicles not exceeding a total weight of 7.5 tons. 15 The opening of the border for the movement of people animated the contacts between the populations on either side, but mainly contributed to small-scale contraband of tobacco products, alcohol and fuel. In an effort to curb these practices, visa fees were raised and customs control was intensified. which reduced the smuggling but at the same time stopped what little tourist traffic there was from that direction.¹⁶ Significantly higher at that time was the number of German tourists, who came to Goldap out of sentiment for their old "Vaterland", while not missing an the opportunity for a cheap holiday.

¹³ Editorial Staff of the internet website www.Gołdap.org, *Historia Goldapi*, Gołdap 2010.

¹⁴ Historia Goldapi, Goldap 2010; Internet website of Stowarzyszenie Powiatów, Miast i Gmin [the Association of Counties, Towns and Communes] "Stowarzyszenie EGO Kraina Bociana".

¹⁵ A study based on the research project "Wiem jak jest" managed by the Institute of Sociology, Faculty of Philosophy and Sociology at the University of Warsaw.

¹⁶ The Central Statistical Office of Poland reported that in the years 2005–2011 Goldap was visited by, repectively, 102, 159, 63, 12, 13, 12 and 41 tourists of Russian nationality.

Truck traffic, initially small in volume, was not too much of a burden for the town centre. After 1995, however, it increased to such an extent that it became necessary to build a bypass. Its implementation relieved the centre of Goldap and significantly reduced the problem of noise pollution.

In mid-2012, after numerous discussions between the Polish and Russian side, the so-called "small tourist movement" in the border area was allowed again. This was intended to facilitate border crossing by residents of the Polish border zone and of the entire Kaliningrad Oblast for tourist, social and cultural reasons. Nevertheless, this possibility is not often taken advantage of by the residents of Goldap, and so far has not significantly increased the cross-border movement of people, 17 even though the talks between the two governments indicated lively interest among the population. Statistical data indicate that the cross-border traffic does not generate any significant revenues, either for the town or for private businesses. This stagnation is a serious obstacle to the growth of Goldap, which now focuses on profiting from its precious climate and healing properties and expanding its tourist infrastructure and accommodation facilities. Due to its short distance from the Russian Federation, it is assumed that Goldap may become an attractive place to spend a "holiday abroad" for residents of Kaliningrad. Meanwhile, the tourist cross-border traffic has a clearly commercial dimension. The residents of the Kaliningrad Oblast come to the Polish border zone primarily to buy electronic equipment, which at home is for them very expensive or not available.

In order to boost the economy of the region, the Special Economic Zone of Suwałki was created in 1996, consisting of six sub-zones, one of which is located close to the border crossing just outside the town of Gołdap. A major factor in choosing the location was the proximity of the routes linking Western Europe with Scandinavia and the good road infrastructure. The purpose of the zone in Gołdap is to attract foreign capital from Lithuania, Belarus and Russia, together with innovative technologies, and to create new jobs. To date, 895 people have found employment in the zone.¹⁸

Thanks to funds from the state budget and EU grants, new tourist and recreational facilities have been created in the area, and the existing ones renovated, and the technical and social infrastructure and transportation systems have been expanded and modernized. The local authorities are constantly promoting the town. Unfortunately, no response of more than local significance has yet been achieved.

A major problem with the development of Goldap is a small number of companies with large enough capital to generate permanent jobs and a diverse range of services. The situation is made slightly better by the steadily rising flows of goods and tourists through the border crossing. There has also been some interest from foreign investors (Fig. 9).

The spatial structure of Goldap

The population of Goldap in 2011 was 13 401 people. The total area within the administrative boundaries of the town is 1710 has, which yields an average population density of approximately 7.8 capita per hectare. The low population density is connected with the agricultural character of the town. Data from the Central Statistical Office indicate that as compared with its incorporation area of approximately 2735 ha, the area of the town keeps decreasing. In 1960, it was ca 2300 ha, and five years later it was about 1900 ha¹⁹, probably due to the exclusion, after the war, of the land taken over by the State Farms (PGRs).

In the peripheral zone around the historic town, maps from the interwar period feature industrial buildings such as factories and warehouses, which arose in connection with the construction of the railway line. North of the railway line, towards the forest and the lake, housing estates of detached homes have begun to appear where before the war there were isolated farmsteads or buildings related to agricultural production.

That type of spatial structure survived in the town until the late 1970s. The layout clearly showed three urban zones: central, intermediate and outer. The central zone was represented by the historic town centre with the marketplace and a regular grid of

¹⁷ According to an informant from a department responsible for tourism and the town's promotion.

¹⁸ K. Mazur, Specjalne strefy ekonomiczne jako nowe obszary przemysłowe, R. 2004; Official website of the Suwałki Special Economic Zone.

¹⁹ M. Klimczyk, Statystyka miast i osiedli, 1945–1965, Warszawa 1967.

streets, which, when extended, imposed some order on the gradually developed newer parts of the town. The central zone was densely built up, its borders marked by natural barriers such as the river, marshy meadows and low-lying terrain. Most service facilities were concentrated there, mainly in the area of the marketplace.

The intermediate zone around the town centre was characterized by extensive development, interspersed with fields, meadows and wetland. The character of its development was diverse in both its features and functions. First of all, it spread along the valley of the Gołdapa river and the railway line. The only larger unit was the colony of single-family homes located south of the barracks complex.

The large outer zone had always consisted of farmland owned mainly by the residents of the town, as well as forests. Its only buildings were isolated farmsteads set into the hilly landscape.

The trend of dispersed development on the outskirts of towns was virtually absent in the western and northern provinces during the period of the Polish People's Republic. Due to limited availability of land for development (most land being stateowned), till the end of the 1960s the private sector in these parts of Poland was characterized by low growth rate. Some changes in the urban structure were brought about by the agreement between the Polish People's Republic and the Federal Republic of Germany signed in 1970 and by the privatization of agricultural land within town boundaries. But the situation did not improve significantly until after the transformation of 1989. Plots along roads began to be built upon, and at some distance from the town technical facilities appeared as well as cemeteries, clusters of allotment gardens, and buildings associated with the border crossing and the Special Economic Zone. Private ownership of agricultural land was strengthened, and the land was often parcelled out with non-agricultural use in mind. Farming, which was no longer profitable, was replaced with a non-agricultural activity, which in the border area focused on or around retail and wholesale trade and accompanying services, or on the tourist and holiday sector related to Goldap's

spa status. Individual production facilities were not located in one area but on plots separate and often distant from one another. Currently, the main such businesses operating in Gołdap are a sawmill, food processing plant, bakery and factory of envelopes and packaging. The conditions for the development of agriculture are not favourable. In many areas groundwater levels are high, while in others the shaping of the terrain is adverse. That is why the area of fallow land and meadows is on the increase. Agricultural parcels are mainly adjacent to homes, as part of the homestead, and part of the crops are sold on the local market.

In 2001, the local council passed and approved a study on the conditions and directions of spatial development of the town and commune of Goldap.²⁰ The document stating the spatial policy of the local government emphasized the need to protect the valuable landscape and nature resources and strengthen Goldap's role in the region as a border town promoting economic links between the neighbouring countries and growth of tourism and visits to its health resort. New areas for development were designated in the study, mainly in the outer zone, as a supplement to the existing spacial development plan. The summary of land use, as recorded in 1992 and projected for 2012, envisaged almost doubling of the urban development areas at the expense of reducing agricultural-land area to less than a quarter of its original value. (The share of agricultural land was expected to fall from nearly 30 per cent to just over 5 per cent.) Significant increases were assumed mainly in areas used for production, warehousing and transport, and the area of the Special Economic Zone (an increase by approximately 274 ha), which sounds disturbing in the case of a town with a spa status²¹ (Table 1).

In the year 2010, the document was modified, further increasing Goldap's urban areas for development by supplementing urban development with economic and service functions, for which attractive areas were earmarked in the southern part of the town, outside the newly constructed ring road. These areas lie in picturesque landscape and are adjacent to Beautiful Mountain equipped with a ski slope and lift.

²⁰ The study was prepared for an area of 1840 ha, i.e. bigger than the area within the town's administrative boundaries. For the purposes of the study, the area of, among others, the border crossing and the Special Economic Zone were taken into account.

²¹ Zmiana Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta i gminy Goldap, collective work, Goldap 2010.

According to the study, the town with a population of approximately 13.5 thousand was to stretch from the state border southwards over more than 5.5 km, yielding a population density in the urban area after the investment of only 13 persons per hectare.

For the sake of comparison with the current study, a balance sheet and map of the town's land use were prepared in 2012, based on satellite images and onsite inspection (Table 2 and Fig. 10)²², which shows that the urban developed areas, i.e. those used for buildings, transportation and greenery, take up 25.8 per cent of the total (built-up area - only 18.8 per cent). Non-urbanized areas, i.e. forests, meadows, pastures, cultivated fields, and waters, on the other hand, constitute as much as 74.2 per cent. The population density in built-up areas is 30.4 per hectare, for strictly residential areas about 48 per hectare, and the figures are comparable with those for other small towns in Poland. If we compare them with small German towns, we will see that there the population density is much higher, ranging from 50 to 100 people per hectare. In Germany, there are 1,374 small towns (up to 20 thousand inhabitants), 100 of which have only from 283 to 2,411 residents. The most sparsely populated are towns in the socalled neuen Länder (former East Germany), and the most densely populated are towns in the western federal states, located within the metropolitan areas of big cities.

When the data from the 1992 version of the study are juxtaposed with the balance sheet of 2012, it can be concluded that during the two decades the urban developed area within the boundaries of Goldap changed only slightly. Further sprawl took place, especially in the southern and northern directions. Areas of detached houses have spread mainly in the intermediate zone between the area of the historic town and Lake Goldap. It is here that a garden suburb with spa and recreational functions has arisen. Its attractive feature is a reservoir created in recent years on the River Goldapa (Fig. 11). Its construction, on wetlands and floodplains, was launched at the initiative of residents. Around the reservoir, next to single-family housing, new recreational and sports facilities are being built, which will undoubtedly enrich Goldap's holiday offer.

The area of Lake Gołdap and the Kumiecie forest in the northern part of the town is where the spa complex is located. Its natural beauty and resources have attracted recreational investments such as hotels, guest houses, camping grounds, sports equipment rentals, and souvenir stalls. The biggest investment project is the construction of brine springs and graduation towers (Fig. 12). Isolated buildings located in the woods and on the shores of the lake do not yet give the impression of a spa and holiday district, and they are planned to be linked with a promenade.

Independently of the development of the intermediate zone, new buildings erected by private investors are being added in the historic area of the town, in the central zone, hence multi-purpose buildings are beginning to prevail here. Standard-looking five-storey multi-family buildings are being supplemented with small tenement houses with shops and services on the ground floor, or with buildings with purely service functions (the town hall, small banks, a hotel, a post office, schools and commercial pavilions). The new buildings, despite their diversity, are better harmonized with the preserved historic buildings (hospital, church, barracks) than the standardized blocks of flats built in the communist period (Fig. 13). To enrich and bring order to the town's public spaces the large area of the marketplace has been rearranged, one part of it as a park and green area, and another as a car-park (Figs. 14, 15).

When juxtaposing Goldap's needs of land for development as defined in the study with the actual land development in the town to date, it is clear that they were greatly overestimated. Leaving too large an area for development to a town which in terms of its population has little chance of growth will raise the costs of the expansion and maintenance of its municipal infrastructure. The process of extensive and random development in the intermediate zone will continue, accompanied by scattering of buildings in the peripheral zone (Fig. 16), which will have a negative impact on the landscape and on the natural environment. The local authorities, whose ambition it is for Goldap to become a spa and holiday centre close to the border with the Kaliningrad region, are in fact acting against these plans (Fig. 17).

²² The map and listing of the areas has been prepared by Agnieszka Kardaś as part of her diploma thesis on space management, submitted at the Faculty of Geodesy and Cartography.

When comparing the processes observed in Goldap with processes taking place in other small towns in Poland, one can come to the general conclusion that the process of fragmented and dispersed development in this group of towns, regardless of the region, is becoming all to common. What differentiates it from the process of suburbanisation around large cities is that in the case of small towns it takes place within their administrative boundaries. The large physical area of most of these towns is an incentive to thin out the urban tissue. This tendency is helped by an amendment to the Act on the Protection of Agricultural Land, which since 2009 does not apply to agricultural land lying within the boundaries of towns or cities. The process of deconcentration occurring within small towns makes their development increasingly costly, disorderly in terms of urban planning and invasive for the natural environment.

The low population density of small towns in Poland is primarily a result of their historically agricultural origins, as was the case with Gołdap. Small towns located far from metropolitan areas are today subject to depopulation processes and consequently to a steady decrease of their population density, and yet they plan a significant increase in the land area allocated for development. This is allowed also by the system of spatial planning in Poland in which priority is given to the interests of the private sector.

The observed causes of changes in the structure of land use in almost all small towns in Poland are nearly the same. These are mainly: inhabitants' departure from agricultural occupations, poor profitability of small and fragmented farms, low land prices and lack of factors stimulating a concentration of urban functions in areas already urbanized, a flawed system of space management, especially with respect to spatial planning, as well as very low motivation to protect the natural and landscape values of undeveloped land.

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Bibliography:

- A. Kardaś, M.Sc. thesis: *Kierunki aktywizacji funkc-jonalnej centrum na tle miasta Goldap*, Warszawa 2012.
- M. Klimczyk, *Statystyka miast i osiedli, 1945-1965*, Warszawa 1967.
 - J. Kopciał, Goldap i okolice, Suwałki 1995.
- A. Kostrzewa, Niemcy na Warmii i Mazurach w 1945 roku, R. 2012.
- A. Kubiak-Sokół, *Słownik nazw miejscowości i miesz-kańców*, R. 2007.
- J. Kurkowska-Ciechańska, A. Ciechańska, *Linia kolejowa Botkuny Żytkiejmy*, R. 2012.
- K. Mazur, Specjalne strefy ekonomiczne jako nowe obszary przemysłowe, R. 2004.
- M. Siuchniński, *Miasta polskie w Tysiącleciu*, Tom pierwszy, Wrocław 1965.
 - J. Słoma, Jak powstała Gołdap, R. 2011.
- D. Zeigert, Verschwundene Gleise, Die Kaiserbahn Goldap Szittkehmen, Goldap 2011.

Zmiana Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta i gminy Goldap, praca zbiorowa, Goldap 2010.

Jan Maciej Chmielewski, prof. dr hab., Eng., architect
Department of Geodesy and Cartography
Warsaw University of Technology
Agnieszka Kardaś, M. Sc.
Department of Geodesy and Cartography
Warsaw University of Technology