THE SECTORAL PLAN FOR HEALTH PROMOTION: AN INNOVATIVE INSTRUMENT FOR A MORE JUST CITY

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The promotion of health is a joined interest of urban planners and health professionals. Due to the existing and increasing inequity in health and the knowledge on vulnerability and environmental determinants of health, the concepts of health inequity and environmental justice enrich each other (Bolte et al., 2012). One approach to reach more health for all promoted by WHO is called "health in all policies". One policy field for health promotion is urban planning.
Today health professionals make only little use of urban planning as policy for health promotion. To face this shortcoming the Landeszentrum Gesundheit (LZG, NRW Centre for Health) pursues the development of an innovative instrument: the sectoral plan for health promotion (Fachplan Gesundheit). This plan is based on an integrated spatial analysis of health, social and environmental data, identifies risks and potentials, develops goals and strategies to identify specific measures. This instrument was theoretically developed, illustrated through fictitious plans (LZG, 2012) and tested in a county and a city in 2014. As common in health promotion a consequent consideration of the vulnerability of the population is a natural approach in these plans. Therefore such plans are not only useful for health promotion; they have the potential to put discussions on justice in planning on a solid ground and provide information for planning decisions.
The approach and first experiences from the practical test will be presented and put in a wider context of planning. Here we argue why we see the healthy urban development plan as a promising tool for a more just city.

1. Introduction

The present discourse on urban healthy development stands for the revival of health promotion in urban planning that has had received little attention in the last decades of the 20th century (Corburn, 2013; Böhme *et al.*, 2012; Köckler *et al.*, 2014). One reason for this growing interest is the existing and increasing inequity in health, that leads to differences in life expectancy by class and/or neighbourhood (CSDH, 2008; Junior-Forschungsgruppe Salus, 2012).Furthermore the knowledge on both the vulnerability of people and the relevance of environmental determinants for individual health, make the promotion of health for all a joined interest of urban planners and health professionals. While health inequity that correlates with social and/or environmental factors is often seen as an inequality there is a strong interest and contribution of the disciplines of healthy urban planning and public health in the discourse on environmental justice. The concept of environmental justice stands for social justice according to environmental concerns (Bolte et al., 2012).

Several analyses in the field of environmental justice conclude that certain groups of society are more exposed to environmental stressors and have less access to environmental goods than the average of the comparable population (see for Germany e.g. Raddatz and Mennis, 2013) and have to face negative health-outcome due to this factors (Fecht *et al.*, 2015; Bolte *et al.*, 2012). These groups are often deprived groups or groups with a certain ethnicity or migration background. In the discourse on environmental justice such differences are judged as distributional injustice, because an identifiable sub-group of the overall society is not treated equally regarding environmental quality. As environmental justice is not only a concept for analysis, but a vision such results on distributional injustice often lead to claim making for change (for the concept of claim making in environmental justice research see especially Walker, 2012, chapter 1 and especially chapter 3).

The concept of environmental justice encompasses besides distributional justice procedural injustice as another relevant concern. Procedural injustice "stands for unequal opportunities in the meaningful

involvement in environmental decision-making processes as well as the initialisation of such processes." (Köckler, 2014, p. 141). Procedural justice is understood as one determinant of distributional justice as Schlosberg (2007, p. 75) points out „For the environmental justice movement, the demand for more public participation and procedural equity in the development, implementation, and oversight of environmental policy is the key to address issues of distributional equity, recognition, and capabilities.“
In the field of urban healthy development it is not only the public that should and could be meaningful involved in decision making. Relevant stakeholders, like the health authority, should also be involved, as they know better than the planning department about health inequality and could play the role of an advocate for deprived or marginalised groups (on advocacy planning in the context of environmental justice see: Harwood, 2003).

The integration of health aspects in urban planning is on the one hand based on law. In Germany §1 of the Federal Building Code calls for healthy living conditions at work and at home. On the other hand it corresponds with the WHO strategy "*health in all policies*" (Ståhl *et al.*, 2006). This calls for considering health in different policies. Urban and infrastructure planning are fields of policies mentioned in corresponding statements (see e.g. WHO and Government of South Australia, 2010).

In Germany public health promotion is based on federal acts. In North Rhine- Westphalia, one of the federal states in Germany, the Public Health Service Act from 1997 provides the legal basis for public activity in health promotion (Land Nordrhein-Westfalen, 1997). The lower health authorities are located in county-free cities or counties. In §8 of the Public Health Service Act the lower health authorities, are mentioned to be included in the formulation of statements in planning and permission procedures, if health of the population is affected. Nonetheless health professionals make only little use of urban planning as a policy field for health promotion. Often public health authorities understand themselves as reactive towards diseases (like HIV) or as active in promoting a more healthy behaviour (like providing information on healthy nutrition). If they participate in urban planning they understand themselves as reactive mainly. To increase the use of urban planning for health promotion the Landeszentrum Gesundheit (LZG, NRW Centre for Health) pursues the development of an innovative instrument: the Sectoral Plan for Health Promotion (Fachplan Gesundheit) since the year 2009.

In the following the development of the sectoral plan for health promotion as a new instrument is described by introducing its aim, first prototypes, so called fictitious Plans for Health Promotion and a first pilot-test. The authors have been actively involved in the development of the fictitious plans and the evaluation of the pilot-test. The paper closes with a conclusion on whether and how this new type of plan may contribute to a more just city with regard to the concept of environmental justice.

2. The Sectoral Plan for Health Promotion

The sectoral plan for health promotion is intended to be integrated in the existing structure of public health. It follows two main goals: On the hand it is meant to support municipalities and counties to organise the work of local health authorities more clear and transparent. On the other hand it is a promising tool to enforce health concerns in spatial planning procedures on the local and regional level. [1]

2.1 The starting point in Public Health

The new instrument of a sectoral plan for health promotion is seen a forceful further development of the existing structures in public health in North Rhine-Westphalia. The existing structure of public health, based on the Public Health Service Act, requires amongst others running a local health monitoring. This data is collected by the lower health authority and is to take social and gender specific requirements into account (§21 Public Health Service Act). This data is published regularly in

[1] for general information see https://www.lzg.nrw.de/themen/Gesundheit_planen/fachplan_gesundheit/, last access May 11th 2015

local reports and transferred to the federal state level. It includes different data on morbidity, mortality, health care and child health. One important source of data is the school entry health examination that is mandatory for each child before going to school and therefore provides a census of all children around the age of six. More and more reports use the data to analyse whether health inequities exist in their cities or to identify districts or neighbourhoods with a specific need for intervention. In Bavaria the school entry examinations have had a thematic focus on environment and health that led to findings on environmental injustice in Munich (Thiele and Bolte, 2011).

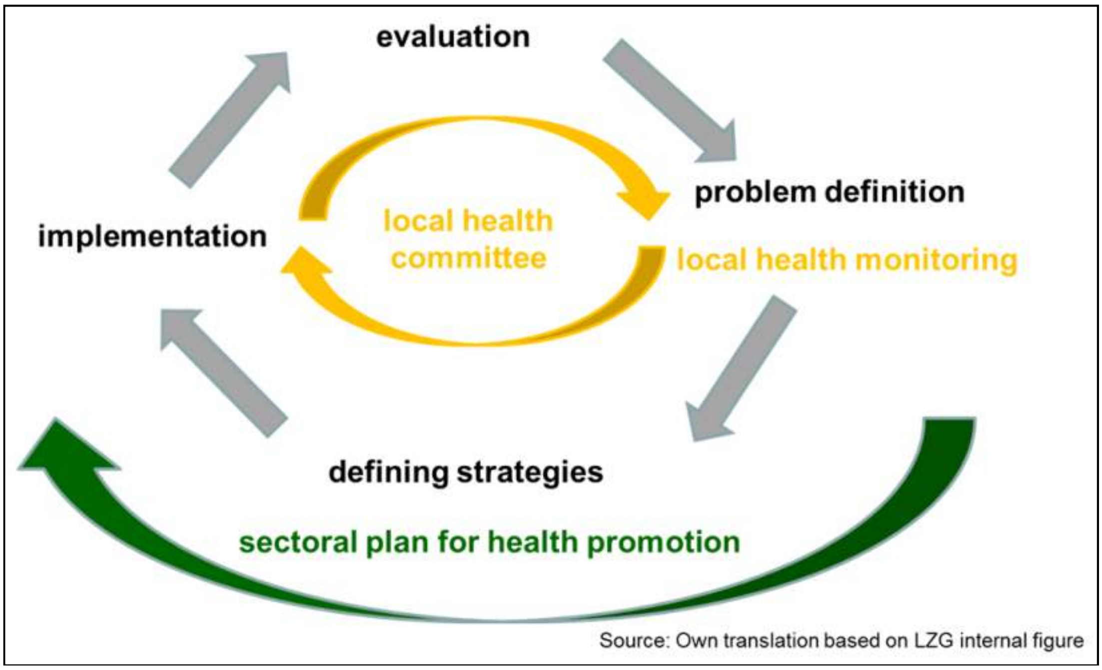


Figure 1: The sectoral plan for health promotion a contribution to the Public Health Action Cycle

Figure 1 shows the policy cycle in the version of a public health action cycle. In the cycle local health monitoring is part of the problem definition and intended to be used for defining strategies. Such strategies are amongst others developed by the Local Health Committee (Gesundheitskonferenz). In North Rhine-Westphalia, such committees are required on a legal basis. Their members are appointed by the local council and include different stakeholders from health promotion including politicians, members of local administration, provider of health services, self-regulating communities, patients organisation and others. Strategies that are developed in the Local Health Committee are implemented by its members due to their ability and responsibility. The work of the Local Health Committees differs in intensity and scope amongst each other a lot.

2.2Protoypes of Sectoral Plans for Health Promotion

Based on preliminary studies the department of Urban and Regional Planning of the School of Urban Planning, TU Dortmund was commissioned by the Landeszentrum Gesundheit NRW to develop prototypes of fictitious plans for health promotion. One aim was to give examples how such a plan could look like and how such a kind of plan might be integrated in planning procedures. To take different contexts into account one plan was developed for a fictitious city and another for a fictitious county. The following description refers to the plan for a city called "Healthhausen" (LZG , 2012).

In the prototypes it is suggested to develop the plan by a steering group including different stakeholder led by the mayor of a city. Another option is to develop the plan within the local health authority including contributions from other authorities and stakeholders. In general it is recommended to start with a mandate from the city council and the Local Health Committee.

Furthermore it is suggested to start the development of the plan with specific topics that are of interest in the local context. In the Healthhausen prototype the following topics have been chosen: A) healthy nutrition and physical activity for children and teenager from low income households, B) physical activity of the elderly, C) health promotion of vulnerable groups facing multiple environmental burdens.
Figure 2 shows different elements of the sectoral plan for health promotion. In the following the thematic focus C) "health promotion of vulnerable groups facing multiple environmental burdens" of the prototype for the fictitious city of Healthhausen is used as an example to explain the different elements of a sectoral plan for health promotion.

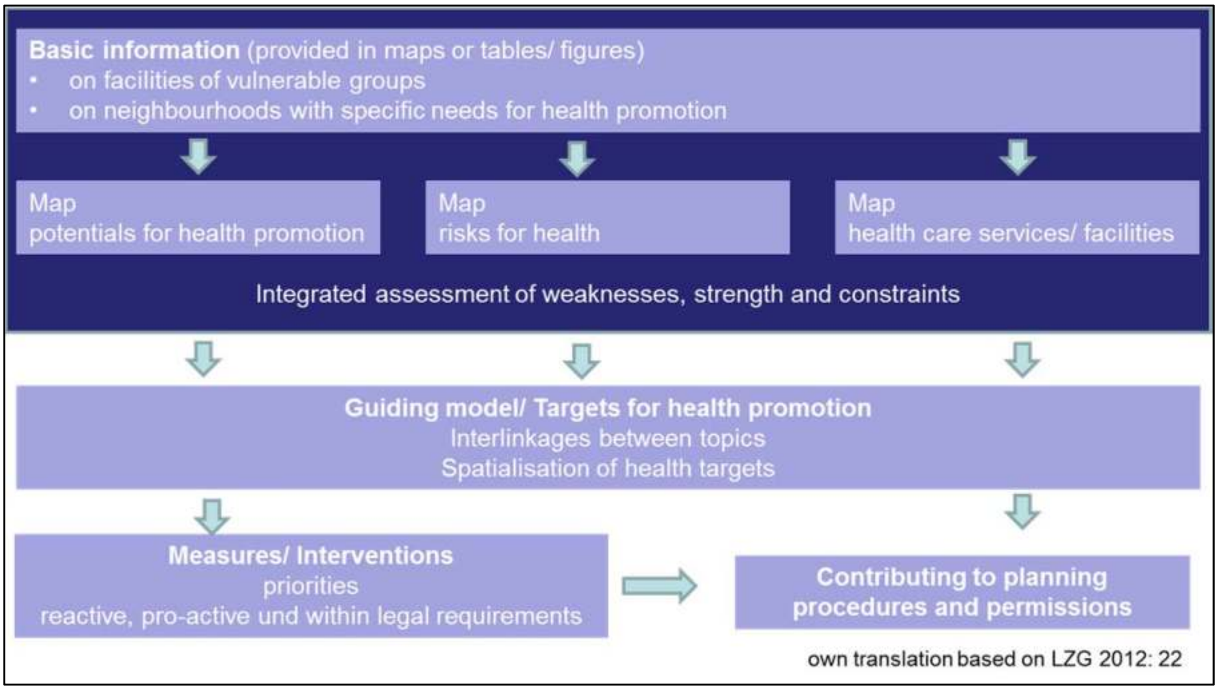
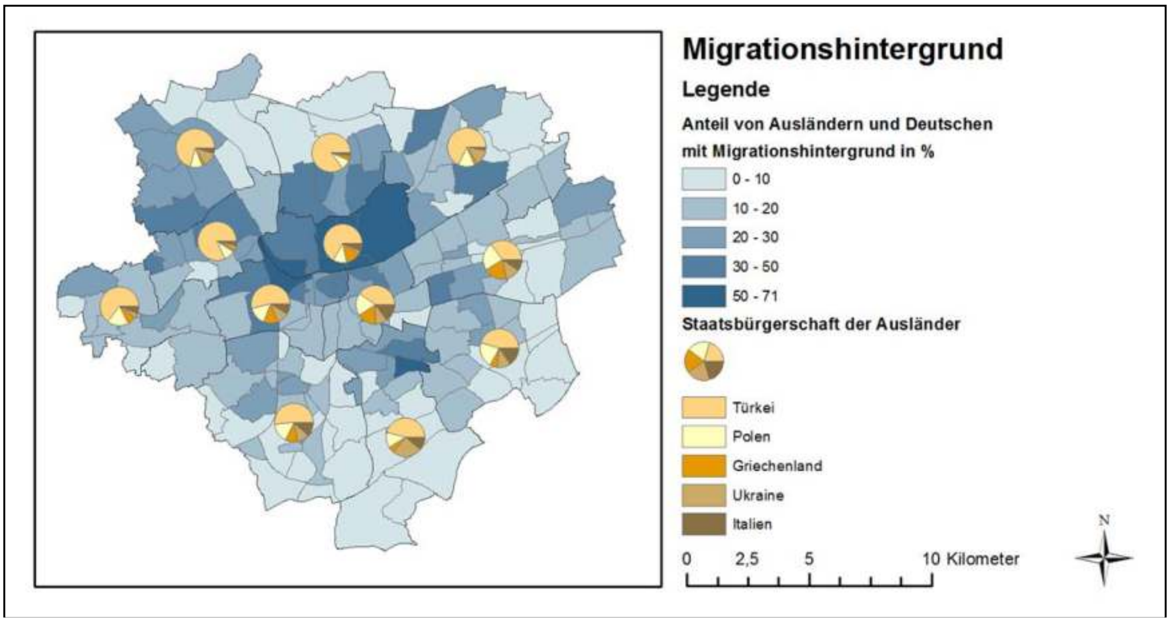


Figure 2: Elements of a sectoral plan for health promotion

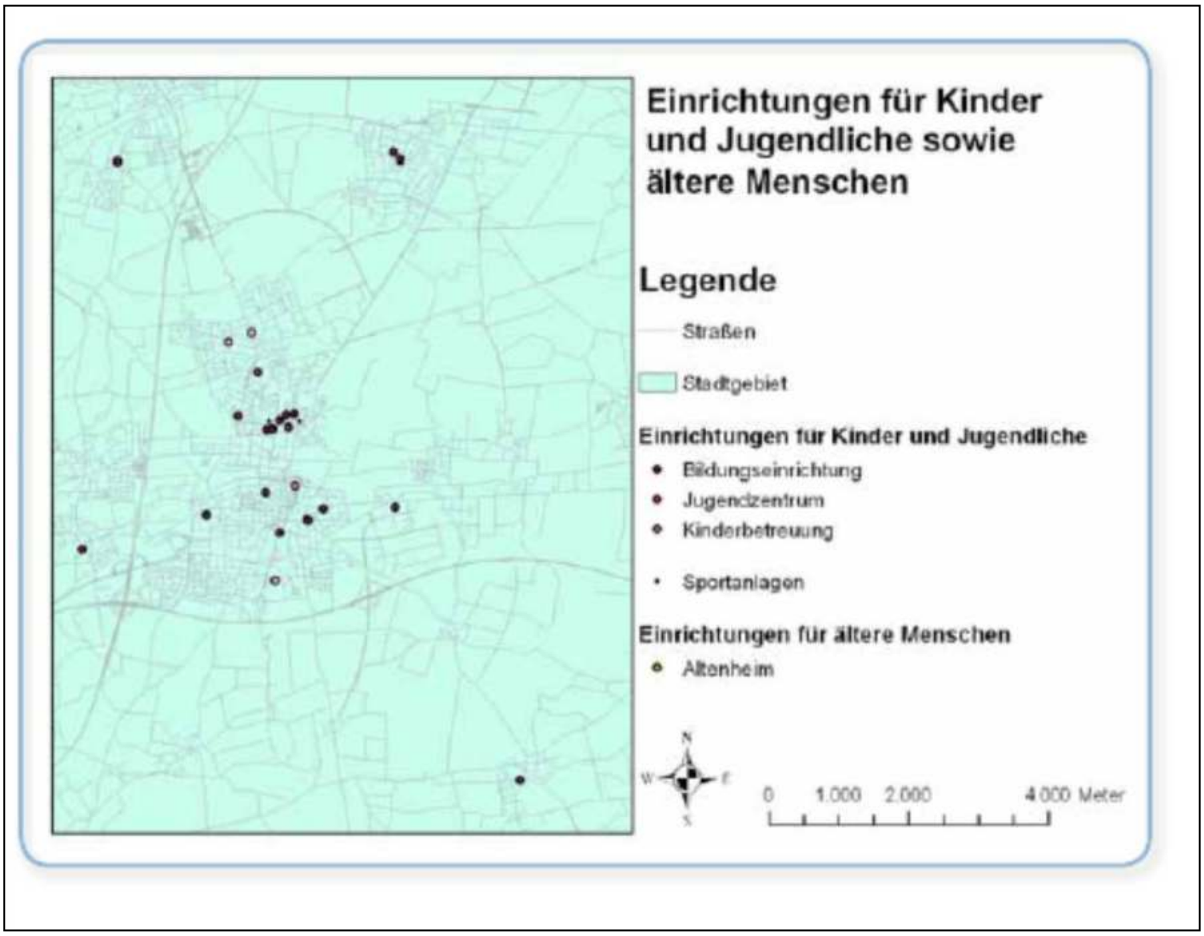
2.2.1 Basic Information and integrated assessment

Facing the state of research on environmental epidemiology and environmental justice, it is known that some groups of migrants and people with low income are more vulnerable towards environmental stressors than others. Therefore maps, like that in Figure 3 have been developed. Facilities of vulnerable groups are shown in Figure 4 and are available in the local health monitoring. Additionally data from the local health monitoring on health outcomes like speech disorder or overweight are mapped, too.



Source: LZG 2012: 25

Figure 3: Foreigners and Germans with migration background (share of whole population and nationality of foreigners)

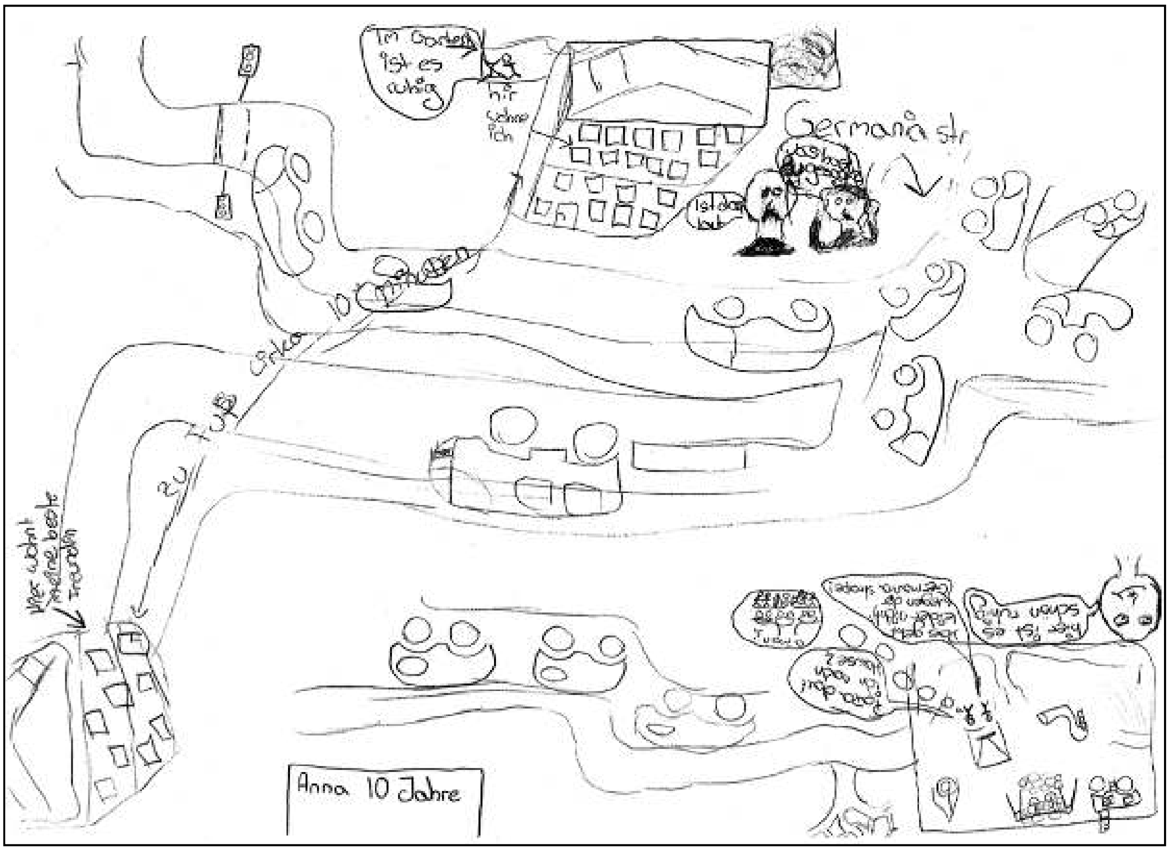


Source: LZG 2012: 24

Figure 4: Facilities for children, youth, elderly and ill people in Healthhausen

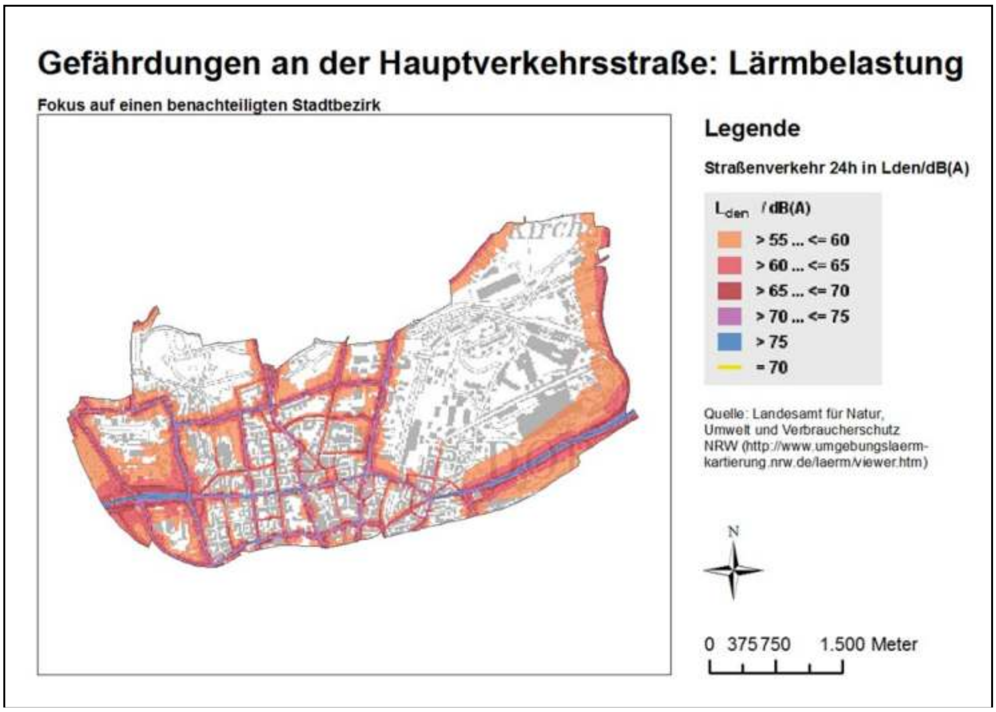
The aspect of multiple burdens was dealt with by providing maps on air and noise immission based on data available in the local environment department, according to EU-Regulations (see Figure 6).

Additionally it was shown that e.g. mental maps of children on quiet areas within neighbourhoods could be integrated in sectoral plans for health promotion, too (see Figure 5).
An integrated assessment of these single burdens was not carried out, but is topic of different research activities and could be implemented based on this basic information (Linder and Sexton, 2011).
Vulnerable facilities and exposure are combined in one map. So it becomes obvious that a kindergarden is exposed to noise with more 70 Lden/dB(A). In noise immission maps such combinations of environmental stressors and vulnerable groups is not required.



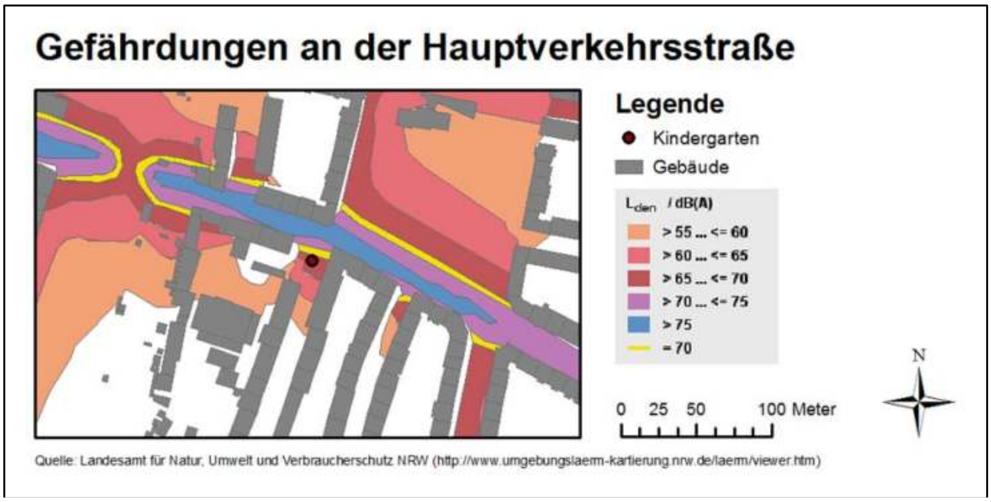
Source: LZG 2012: 40

Figure 5: Quiet areas within neighborhood perceived by a ten year old



Source: LZG 2012: 44

Figure 6: Noise immission by road transport in a deprived neighborhood



Source: LZG 2012: 51

Figure 7: Exposure of kindergarden with noise immissions

2.2.2 Targets for health promotion

In the fictitious plan for Healthhausen the targets have been formulated as a Leitbild and as action oriented targets. For the thematic focus of "health promotion for vulnerable groups facing multiple burdens" the overall Leitbild was drafted as follows: *The burden of those, who are exposed by heavily trafficked roads, is to be minimized. Simultaneously the ability of exposed population to cope with remaining environmental burdens hast to be improved.*

This Leitbild has been operationalised by the following action oriented targets:

- All facilities of vulnerable groups (kindergarden, schools, homes of the elderly, hospitals), that are exposed to noise by cars are to be protected against this noise.
- Next year in three Kindergardens in the northern part of Healthhausen traffic calming will be implemented

Quiet housing space is to be saved and developed. Especially in heavy trafficked roads passive noise protection is to be realized in 20% of the exposed housing space. Specific funding for deprived neighbourhoods will be provided.

The exposure at workplaces on heavily trafficked roads has to be reduced.

The Leitbild and target are exemplary, only. But they show that from a health perspective spatially explicit targets can be derived from the analysis of the maps shown in chapter 2.2.1. Furthermore specific requirements for spatial interventions, like traffic calming and development of quiet housing and working areas have been formulated. These could be used as contributions to planning procedures by local health authorities.

2.2.3 Measures for health promotion

Different measures for interventions have been suggested in the fictitious sectoral plan for health promotion. These have been collected in a table. Selected measures have been described in short profiles.

The table provides information on the kind of measure (organizational, related to planning or investment), costs of the measure (low, moderate, high) and feasibility (short-term, medium-term, long-term).

Table 1: Table of Measures in the fictitious sectoral plan for health promotion of Healthhausen (excerpt)

topic/measure	**kind of measure**			**expenses**			**feasibility**		
	o	p	i	l	m	h	st	mt	lt
Health promotion of vulnerable groups facing multiple burdens (using the example of highly trafficked roads)									
transport calming/ reduction	X	X	X		X			X	
noise minimisation on street sections where facilities of vulnerable groups are located	X	X		X			X		
silent asphalt on roads with high pressure on vulnerable groups	X	X	X			X		X	
speed limit of 30km/h at specific times of a day (depending on opening hours of facilities for vulnerabel groups)	X	X		X			X		
Assignments in binding land use plans on passive noise protection	X	X		X				X	

Explanation of abbreviations used in the table:
kind of measure: o= organizational, p= related to planning, i= reltated to investment),
expenses: l= low, m=moderate, h= high)
feasibility: sm= short-term, mt= medium-term, lt= long-term

Source: own translation of LZG 2012: 59

2.3 First experiences from a practical test in two case-studies

From September 2013 until July 2014 the city region of Aachen and the county Unna, both located in North Rhine-Westphalia, tested the development of a sectoral plan for health promotion.. This project

was supported by the Landeszentrum Gesundheit through financing 1) a planning bureau to support the development of the plan, 2) a scientific evaluation of the process, carried out by the authors of this paper and 3) allowances for the local health authorities of Aachen and Unna. Furthermore existing, and not yet published tools, as well as the fictitious plans described in chapter 2.2 and consulting through the Landeszentrum Gesundheit for the pilot-communities were provided.
In both cases the local health authority was responsible for carrying out the project. Both, Aachen and Unna, chose a specific topic to develop elements of a sectoral plan for health promotion. While Aachen was working on social inequality in dental hygiene, Unna focussed on the exposure of children and youth to electro-magnetic fields. The main focus in this one year project was on the development of maps, targets and the identification of measures. The allowances from Landeszentrum Gesundheit were partly used to train staff members in the use of Quantum GIS. This open source GIS proved to be easy to use and sufficient for the required uses.
The evaluation report and the reports produced by Unna and Aachen will be published soon. Some lessons that can be learned and shared here are the following:

- First of all, the pilot-phase proofed that the idea and methodology of a sectoral plan for health promotion is feasible in practice.
- Several existing data can be used and combined to learn about social inequity in health and environmental determinants of health on the local level. In Aachen data was provided in so called Lebensräumen (life oriented areas), while in Unna data was available for statistical units, only. The life oriented approach is of higher value for health related approaches as it corresponds with the settings approach.
- Staff of both health authorities worked with GIS and appreciates this as a valuable experience.
- In both pilot-cases the exchange with other local departments was somewhat restricted due to the character of a pilot-project. The actors see a big potential in overcoming silo-mentality in public administration through working on a plan like this.
- In the pilote phase no political mandate was formulate. Both Aachen and Unna intent to get a mandate for the further development of the plan after the pilot phase.

2.4 Future perspectives

In Germany different cities start to work on the local plans for health promotion independently from public financial support. For example the city of Bochum aims to develop a plan for health promotion related to an urban renewal programme for deprived neighbourhoods (Förderprogramm Sozial Stadt) in one of its districts.
At present in Baden-Württemberg, another Federal State of Germany, the Ministry of Health launched a programme including financial and organisational support to municipalities that are implementing the sectoral plans for health promotion. This project includes six municipalities, started in December 2014 and will run until February 2016. In this project the participation of citizens in the development of a local plan for health promotion is one aspect of mayor interest. [2]

3. Conclusion

The sectoral plan for health promotion can provide a solid basis for local health authorities to play a more pro-active role in contributing to urban planning by own, health specific, localised targets for urban development. The established health monitoring can be improved through the integration of additional spatial and environmental information and provide a more solid information basis for decision making in the whole city. Such integrated analyses provide meaningful information on vulnerable groups.

If health authorities obtain solid information that helps to identify spatial determinants of health, they can play an active role in urban planning. They can follow the invitation to submit statements in planning procedure or can even initiate planning procedures. Regarding the existing legal

[2] For further information: http://gesundheitsdialog-bw.de/gesundheitsdialog/kreisebene/fachplan-gesundheit/, last access May 11th 2015

requirements, Dieckmann (2013) has given the thought-provoking impulse that situations of multiple environmental burdens might lead to a duty for planning (Planungspflicht according to art. 1 para. 3 no. 1 BauGB). If this duty for planning exists, the municipalities would be obliged to develop a binding land-use plan. Health professionals knowing about environmental determinants of health in their city can identify such areas together with urban planners.

The sectoral plan for health promotion is a voluntary planning instrument. The municipalities in Germany have experience with different voluntary plans that can become local law through a resolution of the local parliament. Sectoral plans on retail, transport or the environment are common. To let local plans for health promotion become an established instrument in urban planning the staff of locals authorities has to be empowered to use this tool and get an understanding of being a pro-active actor on the local level.

Regarding its potential the sectoral plan for health promotion can contribute to a more just city, acting against environmental exposure of vulnerable people and decrease peoples vulnerability. The local health authority could use this tool being an advocate for those facing the consequences of environmental injustice.

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