

# Environmental Justice Indicators in Municipalities in Israel

New Report by the Association of the Environmental Justice in Israel (AEJI)

## Summary 2015

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## Environmental Justice Indicators in Municipalities in Israel<sup>1</sup>

In recent years the prominence of 'social justice' and 'environmental protection' has increased in the public discourse in Israel. Environmental Justice combines these two principles in order to ensure that all population groups, identified by gender, socio-economic, ethnic and/or peripheral recognition, benefit equally clean environment and free of environmental and health risks. The new research of "Environmental justice indicators in municipalities in Israel" has empirically examined the state of environmental justice in different areas towards the development defined index of "Environmental Justice in Israel". The indices examine the inequality between the municipalities and the state of environmental hazards in five categories: wastewater treatment, water quality, accessible public transportation, air pollution and public open spaces. It has been aimed to launch a long term research, therefore the 'Environmental justice' has examined by constructing a database for all municipalities and local councils in the country.

### The Findings

**The treatment of sewage** - there were significant improvements in recent years in this field, but it appears that remain significant gaps between different communities. The indicator examined the rate of the (untreated) sewage that removed to the environment, relatively of the total wastewater per municipality. The gaps are revealed that 11.4% of all Jewish communities are suffering spilling of more than one percent rate of sewage discharge to the environment compared to 78.2% of Arab towns and 62.5% in mixed<sup>2</sup> communities. In average, Jewish communities suffer from the fact that 2.5% of the sewage disposed of the environment, the mixed communities' rate rises to 14.7% (these communities are heavily influenced by the rate of effluent discharged to the environment in East Jerusalem) and among Arab communities the rate stands at 21.1%, more than 8 times in relation to the Jewish communities. Class differences were

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<sup>1</sup> The full research will be published by the end of 2016, at [www.AEJI.org.il](http://www.AEJI.org.il)

<sup>2</sup> mixed Jewish-Arab communities

also found in sewage treatment: in communities are ranked on the lowest clusters of 1-4, around 15-20% of the sewage being tossed around, in average, on (upper) class clusters 5-10 less than 5%.

**Water quality** - Examination of water quality is based on the rate of abnormal microbiological tests, after return sampling. Arab communities expose disproportionate in average to 0.249% -0.363%, while Jewish settlements abnormal rate is 0.118%. Comparison of socio-economic clusters indicates on less significant gaps, but still there has been a decline in abnormality on upper socio-economic clusters. Also, residents of the northern Israel have been exposed to abnormal high rate relative to other communities. Still, water quality has improved over the years, generally over the different districts, and almost all localities perform relatively low abnormal rate.

**Accessibility to public transportation** – In the field of public transport we have examined two different parameters: the supply of transport and use. Transport supply was examined by using a database GTFS for the bus lines all over the country. We have developed Software aimed for database analysis, and examined the number of buses per capita in each local authority undergoing at arbitrary day during the week. For examining the demand for public transport, we scrutinized the use of buses or trains for reach to work places, using national census data for 2008. There is no doubt that Arab communities suffer from lack of access to public transport. On average, the Arab communities are served by 8.59 buses per thousand people, relative to 20.65 and 24.27 in Jewish settlements and in mixed communities retrospectively. When considering the rate of use in public transport, an interesting picture emerges. Among Jewish settlements the rate of use is decreased as the socio-economic clusters is higher, but among Arab communities usage rate remained low in all socio-economic clusters, probably due to the shortage of public transport. Interesting to point out is the finding that in (higher) clusters 9-10, the use rate in public transport is the lowest, whereas the supply of public transport is the highest. It seems that the state actually advance public transportation in communities that least need them.

**Air pollution** - Air pollution is the only category in which we used the data for the geographical districts and for municipalities, from 2 reasons: air pollution often spreads over municipalities range, and due to lack of data at the level of the municipality. First, we calculated an annual air pollution index for each region, by examining the number of days when air pollution was discovered in a high or very high status, in one of the monitoring stations in the region. The results show the high air pollution mainly in gush Dan region (central Israel, municipalities locate in circles around Tel Aviv). High air pollution was discovered also in Jerusalem, inner coastal plain, Southern coastal plain and Haifa and its surroundings. In the second phase, we attributed to any community in the air pollution levels typical to the region where locating, and we compared between the municipalities. Unlike other categories were investigated in this report, the lowest air pollution prevails on communities ranked on the lowest Socio-economic level. Probably the strongest communities locate on central regions, therefore identified with more industrial activity and congestion on the roads. The analysis also shows that Arab communities suffer less pollution with respect to Jewish settlements.

**Open spaces** – According to the report which reviewed over 200 municipalities, Arab municipalities have on average only 0.34 public open spaces per capita, compared with 7.36 public open spaces per capita in Jewish municipalities. Low and middle-income towns also suffer from environmental injustice. Of the 54 municipalities with the lowest rates of access to public open spaces, only one is a higher income municipality, 51 of them are Arab municipalities. High-income towns and cities comprised 19 out of 20 of the municipalities with the highest access to public open spaces.

An official planning guide by the Housing ministry for urban public gardens<sup>3</sup> creates discrimination when the planning guideline indicate on allocating 10 square meters per resident in Arab and Ultra-orthodox (religious) municipalities and 15 square meters of green open space per resident in Jewish municipalities.

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<sup>3</sup> By the Housing and Building Ministry, with participation of the Environment Protection ministry, and the Agriculture and Rural Development Ministry (2012).

## Conclusions

At this stage you can draw practical conclusions. It is clear from the data that must act urgently to be treated as reuse of wastewater as part of the sewer system, and focus in Arab communities in the lowest clusters of 1-4. *Public transport and open public areas is needed is a real revolution*, a category in which environmental *injustice* is identified with Arab towns and villages, noticeable in socio-economic clusters that particularly lower. The most important conclusion is that Israeli policy has led to the significant cases of injustice and inequality in environmental quality, and so remedy the situation must be that environmental justice considerations will be taken into decision making processes and procedures.

Another point have been raised in the report, is following the clear indication that economically vulnerable communities are also often the most subject to environmental risks, therefore such communities may lag behind in empirical data and scientific literacy, legal and advocacy capacity, and access to information. This situation presents particular challenges for us as initiator of the research to addressing those communities' environmental problems to the local, regional and national governance. In the next stage we will continue to expand the research, to further elaborate the accumulated data, aimed to develop an Environmental Justice Index on national level and to monitor along time.

In this context, following the astounding gap relates the findings as emerged in frame of this research, AEJI has chosen to advance in practice the concept of Community-Gardening in Arab municipalities, aimed to achieve the expansion of open spaces and advance active participation of the local population via empowerment processes.

AEJI has conducted the legal research on Environment Democracy Index by the World Resources Institute, part of our perception that civil engagement and public participation should be advance in different ways including: informing the public, holding public hearings and consultations, and fostering a meaningful partnership between government agencies and the public.