

## TRANSPORT

---

Meira Hanson\*

*Transport, Today and Tomorrow*

Transport planning in Israel, despite any rhetoric to the contrary, accepts car-dependence as a given, even though car dependence, using the language of Agenda 21, is 'an unsustainable pattern of consumption'. The rationale behind this contribution to the NGO shadow report is that car dependence is not inevitable. Since policies do not follow directly from the main problem as posited below, the chapter is divided conceptually into two main sections.

The first part will outline the current trends with particular attention to the Trans-Israel Highway and the campaign against it, which has dominated the last ten years. The second part offers a consideration of transport policy targets in light of measures set by Agenda 21 for promoting sustainable transport systems in cities (article 7.52).

Finally, a short discussion of institutional, organizational, political and other problems will show why Israel has a long way to go towards environmentally sustainable transport. Several recommendations for NGO activity to hasten this process will be offered.

### **Car dependence—an unsustainable mode of consumption**

#### *Mounting Israeli car dependence*

The transport system in Israel in the past decade has gone from bad to worse. According to Central Bureau of Statistics figures, in the ten years between 1990 and 2000 annual vehicle-km figures have increased by 95% and the number of vehicles has increased by 80%, while the area of roads

---

\*This report has drawn substantially from information collected by the author for her forthcoming Worldwatch/Israel report: *Transport and Environment Policy: Where are we moving to?*

available has increased only by 36% and the length of roads by 23%. The consequence is road congestion, which has been, and still is, the focus of transport policy in Israel. However, the question asked by decision-makers and professionals is 'how do we deal with a growing car fleet?' rather than 'is the increase in motorization inevitable?'

All concerned agree that car ownership in Israel is still relatively low compared to other countries with a similar per capita GDP—the motorization rate in 2000 was 220 private cars per 1000 people (compared to 172 in 1990). Furthermore, public transport use (primarily buses), which has traditionally been high, is now decreasing: the percentage of daily trips made by public transport nationally has gone down from 43% in 1984 to 30% in 1996. Following these trends, it is assumed that the motorization rate will grow: the National Transport Master Plan (NTMP) anticipates an average rate of 340 private cars per 1000 people by 2020, a rate which has already been exceeded in the larger suburban settlements. This assumption of a continued rise in car ownership underlies Israel's official report to the Rio+10 summit, as well as other major reports and plans. However, no one has asked why it is inevitable that Israel catch up with the rest of the developed world by adopting a car-dependent transport system, a highly unsustainable mode of consumption.

What are the major problems? Fuel consumption by motor vehicles has risen by 64% between 1990 and 2000 and per-capita consumption by 21%. Figures for 1996 show a per-capita fuel consumption of 0.56 tons of oil equivalent (toe) compared to an EU average of 0.65 toe and an OECD average of 0.83 toe. However, while energy use is a serious resource problem in a country dependent on imports for all of its oil products, Israel's more pertinent resource problems in the near future are water (highly vulnerable to pollutants from roads and leaks from petrol stations) and, primarily, land. Land resources are not only threatened by their direct conversion for the paving of roads and related infrastructure; but also by growing mobility in private cars, which contributes to more spread out development of housing, retail and employment facilities—a pattern of land-use which then increases car-dependence. The problem of sprawl (and the consequent decline of city centers) is becoming the most acute environmental problem in the center of Israel, which is densely populated and suffers from a paucity of open spaces. An indication of this trend is the rise in the number of people living on the outskirts of the Tel-Aviv metropolitan area: from 582.9 thousand—23% of residents in the Tel-Aviv metropolitan area in 1995—to 754 thousand, or 27% of the residents—in 2000.

These changes in land-use patterns could explain why Israelis are driving further than before. (According to the 1996 travel habit survey the length of the average trip has grown from 9.2 passenger-km in 1984 to 13.2 in 1996—a 43% increase). However, while this may indicate an overall rise in mobility, not all of the population is equally affected: in 1999 about 45% of Israeli households did not have access to a private vehicle. The latter make fewer trips, and are dependent on public and other modes of transport. Nor has enough consideration been given to the social cost of car dependence (and consequent deterioration in public transport services) in terms of accessibility—particularly to work places. This problem has already been noted in some rural areas with high unemployment where inefficient public transport limits access to work opportunities. Arab settlements suffer from a similar problem.

Possibly the worst social cost, though, of growing car-dependence are road accidents. The period between 1990 and 2000 has seen a 60% reduction in the rate of fatal and severe accidents per vehicle-km (so roads are becoming safer), but only a 40% drop in the rate of fatal and severe accidents per capita. A probable reason for this is the overall rise in vehicle-km, a growing proportion of which is in private cars. Furthermore, accidents strike the vulnerable populations disproportionately: 20% of those killed in accidents in 2000, for example, were over 65, although they were only about 10% of the population. In addition, 42% of those killed in traffic accidents that year were pedestrians and bicycle riders. With Israeli cities becoming more car-dependent, the disparity in power between motorized and non-motorized transport modes is increasing. Despite this, road accident policy in Israel focuses primarily on making car dependent transport safer, rather than reconsidering a system that has such a high social cost.

In sum, by opting for a car-dependent transport system, Israel has embarked on an environmentally unsustainable trajectory, limiting the resources available to future generations, in addition to denying them the choice of a preferred urban environment. Current generations already suffer from congestion, air-pollution (which is discussed in a separate chapter of the shadow report), noise and costs in human life, health, mobility and accessibility.

### *The Trans-Israel Highway and its opponents*

When considering the past ten years, the decisions that most defined the future of transport and land-use policy were the planning, authorization

and construction process of the 300 km-long Trans-Israel highway. While the route of the highway existed in the National Outline Plan for roads prior to the 1990s, it was not much more than a line on the map, until the mass immigration from the (then) USSR was used by the government as a rationale for its development. The professed purpose of the highway is to create a new north-south corridor along the eastern border of Israel (at points parallel to the Green Line), while the central part of the highway is to become the ring road of the Tel-Aviv metropolitan area. To this end, the highway is to have ten large interchanges along the 90 kilometers of its central section, leading off to a network of lateral roads.

The construction of the highway was undertaken despite it being a major investment in road infrastructure at a time when public transport services were deteriorating and rail infrastructure had suffered years of neglect. In addition, besides the large proportion of land to be paved directly in an area which serves as a 'green lung' for the densely populated center of Israel, it is also likely that the highway will draw sprawling development eastward. These were major points introduced in a petition to the High Court of Justice put forward by the Israeli Union for Environmental Defense (IUED), demanding that an environmental impact assessment be carried out for the highway as a whole, rather than the section-by-section assessments submitted. The petition was rejected.

The degree to which the construction of the highway precludes more environmentally sustainable transport alternatives has been debated. Ostensibly, the highway is a privately funded build-operate-transfer (BOT) project, to be run as a toll road. However, the state has paid for the planning, the appropriation of land, compensation (which is constantly growing), for clearing the corridor from infrastructure and building two major interchanges. In addition, the state is responsible for the lateral roads. Furthermore, since its contract with the construction consortium commits the state to compensating up to 72% of losses in the event of a lower number of users than projected, the state now has an interest in securing a high level of road use and in prioritizing the construction of any new lateral roads required.

The NGO campaign against the highway, the first campaign of its kind in Israel, has been going on for almost ten years and is characterized by much muddling. The initial decision of the Society for the Protection of Nature in Israel (SPNI) not to fight the highway as such, but rather to attempt to limit its harmful effects, was coupled by the IUED attempt to try stop the highway, at least temporarily, in court. The consequence was that during the

period when the highway was going through the official channels of authorization, the only group free and willing to campaign against it outright was the newly-founded Green Action. However, its case (at the time) against the highway was far from clear to the public and to decision-makers. Only around 1996 was a more consistent and broadly argued attempt made to build real opposition to the highway and to increase inter-organizational cooperation. Transport policy and alternatives (particularly rail), rather than nature protection, became the focus of the campaign, and professional reports supporting the case against the highway were published. One consequence of this change was a growing realization of the need for a professional NGO promoting environmentally sustainable transport alternatives; 'Transport—Today and Tomorrow' was founded in 1998 to fill this role.

The next step was a massive campaign initiated by the Forum for Public Transport for a parliamentary decision to reconsider the highway. Trying to draw support from various sectors, a coalition was formed bringing together social and environmental organizations. This was not a first attempt at a coalition—a previous attempt was the IUED-led 'Coalition for Environmentally Friendly Public Transport', and on a slightly smaller scale a coalition of women's organizations had also organized a campaign for public transport (prompted by general public concern rather than a feminist analysis). None of these attempts lasted long. However, the forum's work, coupled with a highly colorful campaign carried out by the student group '*Megama Yeruka*' ('Green Course'), began a comprehensive attempt to link together an environmental and social justice agenda. All these efforts reached a climax when the construction of the highway started and a series of attempts to prevent the work ensued, leading to daily arrests. A movement to stop the highway was set up, once again bringing in social organizations and a social agenda, and a substantial public opinion campaign was on its way until it ended, abruptly, with the outbreak of the 'El-Aqsa' Intifada in the fall of 2001.

In terms of preventing the construction of the central section of the highway, the NGO campaign has clearly failed, though it may have raised the stakes for the rest of the highway and for future projects. However, one cannot ignore the fact that transport policy and transport alternatives have become part of the governmental and NGO agenda, and various local initiatives (e.g. promoting bicycle riding) have ensued. Furthermore, time will tell whether the campaign against the highway was the catalyst for a broader social-environmental agenda and the sort of coalition-building necessary for a broad and sustainable environmental movement. It should also be noted,

that the above actions relate only to the NGO national campaign against the highway. The planning and building of the highway have been (and still are) accompanied by resistance from the communities along the highway, which has shifted from outright opposition to noise reduction measures and compensation. Arab communities, in particular, have been a leading force in the local campaign, setting an important precedent by forcing the state to make land exchanges, rather than compensate, for land requisitioned.

## **Follow-up to Agenda 21**

Since Israel is considered a non-annex I country under the United Nations Framework Convention on Climate Change (UNFCCC), it has not been required to reduce carbon emissions. Israel's national report on climate change submitted to the conference of the parties of the UNFCCC merely provides a list of (non-prioritized) recommendations for reducing emissions from transport with equal emphasis on technical and transportation control measures. Lacking precise targets, one can only assess Israel's transport policy in light of a general aim to limit the consumption of resources over time, without harming the overall accessibility of the current generation. A three-level approach should start with reducing the overall need to travel, by integrating land-use and transport planning, promoting alternatives to the private car and, finally, by securing the most eco-efficient transport technologies (e.g. clean buses, clean and alternative fuels, etc.). This type of approach would be in line with the Agenda 21 suggestion to "re-evaluate the present consumption and production patterns in order to reduce energy and national resources" concerning urban transport systems (article 7.52(f)).

In the absence of an overall approach, the following section will focus on Israel's more narrow policy targets as set by a 1997 governmental decision on measures for dealing with road congestion and prioritizing public transport. These targets will be assessed in view of measures set by Agenda 21 for promoting sustainable transport systems in cities. For the sake of brevity, examples are partial and for illustration only.

The first measure to be considered is the suggestion that land-use and transportation planning be integrated to encourage development patterns that reduce transport demand (7.52(a)). This approach has been promoted by the NTMP and the previous National Outline Plan (NOP 31), which focus on increasing densities in existing settlements in order to support viable public transport, but has yet to be translated into local decisions. The new National Outline Plan (NOP 35), which is supposed to set the planning

agenda in Israel for the next 20 years, has the specific agenda of controlling sprawl in the center of Israel. However, its authorization process, initiated in 1996, has been held up time and again due to the diverging interests of different sectors, groups and politicians.

In the meantime, much could have been done in terms of parking policy within the larger cities. Current parking standards in urban centers (which date back to 1983) have a negative effect on the reduction of car use. The 1997 government decision noted above specified that the Minister of Interior take steps to reduce the number of parking spaces to be built in the center of big cities. No target was set, but a new parking standard is being finalized, which is fashioned along the Dutch model and aimed at a strict reduction in the number of parking places near public transport stations in city centers. In Jerusalem, a new standard was confirmed, limiting parking places for business and retail in the city center in order to support the first light-rail line. The Tel-Aviv municipality, on the other hand, has opposed any changes in parking standards until viable public transport alternatives exist, for fear that businesses will move to the outskirts of the city/metropolitan area.

This reasonable objection leads to Agenda 21's next suggestion to "adopt urban transportation programs favoring high-occupancy public transport" (7.52(b)). Here, too, practice lags behind Israel's national planning objectives as set by the previous National Outline Plan (NOP 31), which requires priority for public transport systems (both buses and rail), particularly in the metropolitan areas. Over the years, rail has notably **not** been a priority in budget allocations and most of the state investment in public transport has been in subsidies for the bus system. The government's 1997 decision was followed by a growing investment in rail during the past four years, but it is by no means adequate to cover a serious lag in investment. Israel Rail (the Israeli government-owned rail company) has invested available resources in improving and upgrading existing lines and has increased the number of passengers (there has been a four-fold growth in passenger-km between 1990 and 2000), but it lacks the means for the major relaying and rerouting projects. The position of the budget department of the Ministry of Finance regarding the major projects has been to promote private-sector involvement. An example here is the long-awaited relaying of an extension to the northeastern bound suburban rail line in the Tel-Aviv metropolitan area. This was to be a model of a rail service built and operated by private investors. After endless debates and an NGO campaign, a decision was finally reached in August 2000 whereby the government would fund the

infrastructure work and the operation of the service would be contracted out.

Metropolitan rail programs have not fared much better. For many years now a debate has been going on regarding the nature of the mass-transit system in Tel-Aviv and the surrounding municipalities. Finally, in 1996 the government set up a company with the task of planning and promoting the transport system. However, a change in government brought a more skeptical Minister of Finance who halted the programs temporarily. Then, in 1999, the company came out with its plan for a light-rail system that raised objections from the municipality (which, in turn, favored an underground system). Only in 2000 was a compromise reached. The prolonged process was due not just to lack of funding, but also to the diverging agendas of the different adjoining municipalities. In Jerusalem, where there is one municipality, as opposed to several in the Tel-Aviv area, the latter problem was avoided and the selection process for a company that will build and operate the first light-rail line is underway, albeit with several open questions regarding its interface with the existing bus service.

Israel's official report to the Rio+10 summit notes that metropolitan mass-transit systems are being planned, but fails to mention how long the process has taken. In addition, throughout this period public transport efficiency and patronage could have been increased by improvements in the existing bus system. Israel's professed policy in the 1997 government decision was both to prioritize buses by building bus lanes and to re-plan bus routes. At least 60 million NIS was to be allocated each year to dedicated bus lanes. In the yearly budgets, these funds have indeed been allocated. However, they are not fully utilized, due primarily to political resistance from local authorities who do not wish to antagonize car drivers and shop owners.

While initiatives in mass-transit alternatives to car use may be progressing, albeit slowly, policies in accordance with Agenda 21's suggestion that countries "encourage non-motorized modes of transport by providing safe cycleways and footways in urban and suburban centers in countries as appropriate" (7.52(c)), are insufficient. Israel has not taken on non-motorized transport as a national issue: the NTMP does not consider walking and cycling to be major transport modes and there is no relevant section in the national budget (although this in itself is not an indicator). There is also no national data on non-motorized travel habits. One finds some programs for bicycle lanes in a few municipalities including Tel-Aviv, but the initiative is local, often the result of NGO pressure. Pedestrian zones are just

as scarce, while obstructions on sidewalks, including parked cars, are prevalent.

A final Agenda 21 suggestion that is of relevance to this report is for countries to “devote particular attention to effective traffic management, to efficient operation of public transport and to maintenance of transport infrastructure” (7.52(d)). The 1997 government decision required that the Ministers of Transport and Finance set up a committee to consider the pricing of road infrastructure and particularly congestion pricing. In the ‘Economics Arrangements Law’ accompanying the 2000 budget an article was passed allowing the Ministry of Transport to convert new lanes/roads into high occupancy toll (HOT) lanes. A pilot project is planned for sections of the Tel-Aviv-Jerusalem highway leading into Tel-Aviv and into Jerusalem. HOT lanes could be justified if properly integrated with public transport and the proceeds earmarked accordingly, but as of December 2001 the pilot project has been put on hold by the Minister of Transport, who is concerned about the social implications of charging for the use of a road.

Concerning the efficient operation of public transport, the main instruction of the 1997 government decision was to set up a public transport directorate in the Ministry of Transport in order to increase competition among public transport providers. The directorate is up and operating with alacrity, considering the Ministry’s lags on other fronts. However, the contribution of this liberalization process to increased efficiency is debatable. A major requirement for an efficient system is coordination between public transport services (regarding timetables, information provision, ticketing, transfers between services, etc.). Unfortunately, the history of bus-bus and bus-train coordination in Israel is not good, and without public transport authorities (national or metropolitan) to coordinate services, the situation is unlikely to improve. Unless such measures are introduced, it would appear that the government’s objective is the reduction of state subsidies for public transport, rather than the overall efficiency of the public transport system.

## **Overall assessment and recommendations**

If policy documents promote public transport alternatives, politicians are for rail and everyone would like to reduce congestion, air and noise pollution and road accidents, why is there no notable move away from the current trend toward a car-dependent system? To start, a combination of conflicting policies and hidden subsidies contributes to continuing car dependence:

- Urban sprawl has been encouraged by a rush during the 1990s to free agricultural land in the center of Israel for development, after decades of a strict policy preventing the use of land for non-agricultural purposes. The reasons for this are a steep rise in housing prices in the early 1990s threatening much-feared inflation, coupled with an opportunity to help settle some of the growing debt incurred by agricultural settlements based on the proceeds from the re-designation of their agricultural lands.
- Israel's revenue benefits from high, non-earmarked, taxes on the purchase of cars and car parts.
- A relatively low tax on petrol (compared to European countries) may also encourage car use (though a higher tax on petrol on its own is not a socially equitable policy to limit car use).
- Perks, and related tax concessions, such as company cars, free parking places provided by employers and/or car upkeep allowances given to (mainly white-collar) workers encourage and/or subsidize car use.

These and other conflicts between different government policies and agendas are indicative of the lack of system-wide commitment to environmentally sustainable transport and/or legislation to that effect.

Furthermore, transport planning has traditionally been modal, that is, roads are planned independently of other modes of transport and vice versa. The planning of the Trans-Israel highway independently of other transport systems is a prime example. As the State Comptroller has noted, the decision was not made in light of a comprehensive transport plan. It is at the interfaces between transport modes that transport policy in Israel fails the integration test. No matter how much money is invested in transport alternatives, without a system that enables the traveler to pursue a 'seamless' journey, there is little hope of offering a viable alternative to the private car. However, while some efforts are being made, 'park and ride' facilities are rare, feeder bus services to the train sporadic, many transit stations are not efficient and the interface with non-motorized transport (e.g. bicycle-bus) is almost non-existent.

This has not been helped, over the years, by the institutional split between authorities responsible for the various aspects of transport planning: the Ministry of Transport, Israel Rail, the state's road infrastructure company

and, more recently, the Trans-Israel Highway company. Only in 1999 did the newly elected government finally bring these units together under the auspices of the Ministry of Transport, thus opening a window of opportunity, but which has yet to bring about a real change in the ministry's overall approach.

What can be done? While several (governmental and non-governmental) reports on environmentally sustainable transport policy were studied for this chapter, they do not differ substantially when it comes to recommendations. We do not lack ideas for policy initiatives. Rather, what we face is an **implementation gap** between plans and/or government agendas, and the decisions made in practice. A series of institutional, organizational, political and other failures needs to be overcome

This is a window of opportunity through which NGOs can, and have, become involved. For example, NGOs can, and should, require transport impact assessments of local land-use changes. While such assessments are traditionally 'traffic' rather than 'transport' assessments, the Ministry of Transport is reconsidering the character of these reports, including the place of non-motorized transport. NGOs are also insisting on inter-modality in transport decisions, as has been the case in Jerusalem where the SPNI has used the municipality's professed support for mass-transit to combat initiatives for a new road. However, this sort of activity emphasizes the need for stronger integration on the local NGO front between activists and professionals.

A second area for recommended action relates to **non-motorized transport**. Lack of a national agenda has meant primarily initiatives by local authorities, thereby enhancing the role of local groups such as "Tel-Aviv for Bikes". More can be done here on the level of local coalition-building, by making the obvious connection between such policies as traffic calming and pedestrian zones to road safety and the mobility of particularly vulnerable groups such as the elderly and children.

A further conclusion relates to the major role of **sprawl** in any discussion of environmentally sustainable transport. Considering the current government's attitude towards farmers' rights to develop land that is leased to them, the building of new settlements in Israel and the future of the new National Outline Plan, sprawl is clearly a major issue for environmental activism in the next few years. It is also a possible angle from which to continue the struggle against the detrimental effects of the Trans-Israel highway.

Finally, the future of the struggle against the **Trans-Israel highway** is being debated by the NGOs involved and it is not the role of a single contributor to settle this point. However, since the northern and southern extensions of the highway were never really its selling point, except for rhetorical purposes, they should be reconsidered. At the very least, a re-evaluation of the actual costs accrued to the state by the highway should be conducted and made available to the public.

## References

Avnimelech, Y. et al. 1999. *National Priorities in the Area of Environment in Israel*. Haifa: Mosad Neeman and Economic Forum for Environment in Israel.

Central Bureau of Statistics, various reports.

Feitelson et al. 1998. *Transport Policy for the Protection of the Environment*. Jerusalem: The Ministry of Environment.

Garb, Y. 1997. *The Trans-Israel Highway: Do We Know Enough to Proceed?* Jerusalem: The Floersheimer Institute for Policy Studies.

Gonen, A. 1995. *Between City and Suburb*. Aldershot: Avebury.

Levine, J. and Y. Garb. 2000. *Evaluating the Promise and Hazards of Congestion Pricing Proposals: An Access Centered Approach*. Jerusalem: Floersheimer Institute for Policy Studies

Ministry of Environment. 2000. *Israel National Report on Climate Change; First National Communication to the Conference of the Parties of the UNFCCC*.

Ministry of the Environment. 2000. *Coastal Area Management Programme (CAMP) Israel; Final Integrated Report*.

Ministry of Transport. 1999. *Transport Master Plan*. Jerusalem: Ministry of Transport.

OECD. 1999. *Indicators for the Integration of Environmental Concerns into Transport Policies* (ENV/EPOC/SE(98)1/FINAL).

Sadan, E., E. Daliyahu and R. Lowenthal. 1997. *Route 6 (Trans-Israel) as a Regional 'Measef' or a Suburb Generator at the Expense of National Resources*. Tel Aviv: Sadan and Lowenthal/SPNI.

State Comptroller. 1997. *Annual Report 47*. Jerusalem: State Comptroller.