

Paper presented at the 23rd Congress of the Association of European Schools of Planning, 15th – 18th July 2009, Liverpool, UK

Planning and managing rural recreational traffic flows: why the future can't be more like the past

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Abstract

The increasing popularity of rural tourism can cause traffic related problems at certain areas. Traffic congestion and parking problems are likely to occur as the infrastructure at these countryside destinations is seldom capable of dealing with the growing number of cars. Values which make the sites attractive to visitors can become under pressure and car traffic can also have negative effects on natural values. To prevent for such impacts, recreational traffic management is required.

Recreational traffic management focuses on a smart organisation of recreational traffic flows. It has developed since the 1970s and to-day its character is influencing. Influencing takes place by offering tempting alternative opportunities and packages with varied facilities, based on specific desires of individual recreants. This requires detailed data on recreational use as well as an actor analysis, both on a regional and local scale.

Future recreational traffic management faces many challenges: tension between facilitating growth and preventing for impacts; considering tourism and local economy; and tourism in a “living landscape”. To deal with these future challenges, recreational traffic management cannot be more like the past. To stay successful it needs somewhat different tailor made faces allowing for a further greening of recreational traffic flows and a more integral approach of road network planning, especially in “living landscapes”.

Key-words

Recreational traffic management – implementation – tourism and recreation – rural areas

1. Introduction

For decades tourism and recreation have been important sectors. Many people visit rural heritage sites, coastal regions, National Parks and other nature areas, making the countryside a popular tourism destination. These so called “honey pot sites” are not only popular by foreigners, but also –and sometimes even more- by local visitors as a destination for daytrips. The car is by far the most popular means of transport for these trips. There is a considerable risk that the specific qualities of a site which attracts visitors become threatened by the growing number of visitors and their cars. A phenomenon characterised by the striking expression “loving a place to death”. To improve accessibility and prevent negative environmental impacts caused by driving and parked cars, planning and management of national parks and other rural tourism sites should include traffic management schemes. During the 20th century recreational traffic management has known different faces. This paper aims to show how it has developed and to learn some lessons from the past. We use these lessons to deal with the many challenges facing planning and managing future rural recreational traffic flows and show why the future can't be more like the past.

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2. Development of outdoor recreation and the government's role

In the Netherlands outdoor recreation was founded by private initiatives: local captains of industry developed large parks in different cities around the early 1900s, allowing their industrial workers for a stroll in a pleasant surrounding on a walking distance of home. (The well known Vondelpark in the city of Amsterdam is an example of such a recreation ground). Supported by nature conservation organizations and the Dutch automobile and cyclist association ANWB the focus of recreation and its management shifted to the rural area and to nature reserves since the 1950s. Public transport was still the most important transportation mode then, but since the 1960s a fast growth of the number of cars started. Soon the car became the most popular means of transport, allowing for travelling much longer distances on one day. This expansion resulted in different new initiatives. One of the most eye catching initiatives and a pillar of Dutch governmental spatial policy in the 1960s was the development of "green stars": large parks (say 10 km², see Figure 1) near major cities with outdoor recreation facilities such as inland beaches, festival locations and large scale sports facilities. The underlying idea was the government's ambition to "steer" people with the use of restrictions towards specific recreational areas for purposes of social integration and to spend their time useful. In practise these sites were based on accessibility by car. The consequences of this policy of developing "green stars" in the countryside, considerable motorized traffic flows washing over these parks were clear from the beginning. (As an illustration: for the design in Figure 1 a number of 62,250 recreants travelling by car was modelled). However, there was no policy for specific measures to deal with these mobility problems.

Taking a retrospective view of the 1970s, it is remarkable that the recreant seems to be "voiceless". People are considered to visit the facilities developed within a national governmental framework, based on the idea of raising people. However, in the 1980s awareness about the different desires and ambitions of the recreants and considerable differences between them penetrated. Since then the role of the recreants became more important: recreation provision based on people's desires, rather than spatial policy makers' perceptions of their desires (Curry, 1994). As a consequence, national governmental policy focused more on making the general conditions, leaving making of the specific provisions at site level to local governments. Accessibility and spatial distribution of holidaymakers became important items. This holds for both coastal beaches, with their weather related high peak flows, and inland destinations, where especially in nature reserves the number of driving and/or parked cars may threaten the area's basic qualities.

Comparable developments can be found in other western European countries and the United States, in the growing popularity of the countryside and National Parks.

Concluding about outdoor recreation management in the Netherlands during the previous century we can say that the role of the government has changed dramatically. First, we see that the government is not actively involved. Later on, when people gain more free time through economical development and more freedom as a consequence of the popularity of the car we see that the national government starts to interfere. We only discussed one example but it is an important example which shows that the government wanted to raise its inhabitants in a decent way through recreation. Self initiative from recreants was not incorporated in this policy. Last, it is shown that the national government realized that its steering policy did not work and recreation management was shifted to the local governments. This last development was the first sign of recreation management including mobility aspects and in which the wishes and demands of the recreants are leading, called recreational traffic management (RTM).



Figure 1. Design in the late 1960s for a “green star” development in the countryside, with an area of about 10 km² and a planned capacity for 75,000 recreants, with 65,000 of them traveling a distance of 15 km or more (Dorschkamp & Stiboka, 1971)

3. Development of recreational traffic management (RTM), required knowledge and related research

Mobility management is described as “organizing smart travelling” (KpVV, 2007). It is a reaction to road capacity problems caused by increasing flows of motorized traffic as well as

concerns of traffic related environmental problems. Mobility management is a concept to promote sustainable transport and manage the demand for car use by changing travellers' attitudes and behaviour (EPOMM, 2008). Recreational traffic management (RTM) is a specific part of mobility management, so RTM focuses on a smart organisation of recreational traffic flows, both to rural and urban destinations. RTM promotes the greening of recreational traffic. At its core are "soft" measures like information and communication, organising services and coordinating activities of different partners (Finke, 2009).

Contrary to outdoor recreation, with its history of more than a century, RTM is a much newer phenomenon. Despite the first traffic congestion on a Dutch motorway ever (on Whitsunday 1955) was caused by recreational traffic, and despite the development of "green stars", RTM was absent till the 1970s. RTM developed by steering and control in the 1980s and early 1990s to influencing in the late 1990s, when accessibility became an important item. Influencing takes place by offering alternative opportunities and packages with varied facilities tempting people to certain behaviour. Contrary to steering, which is based on restrictions, influencing tries to tempt holidaymakers to choose for alternatives with less environmental damage (both on the way to and during travelling in the recreational area). This development also includes a shift from RTM on a national level to RTM by regional and/or local authorities. A main reason for this shift is the need for a better understanding of recreants' specific desires and demands on the local level. This is required for an area-specific approach, creating variation with a wide range of possible measures (Cullinane, 1997) and with a focus on the users of the facilities (Curry, 1994). Because of the remaining important role of the car as a means of transport when visiting the countryside, parking policy with measures such as shifts in the number and/or location of parking spaces, parking controls, or parking fees, is usually part of RTM (Beunen *et al.*, 2006). Another approach to reduce the car's role is either offering public transport facilities for the whole trip (Lumsdon *et al.*, 2006) or enabling a transfer from the car to more "green" modes, including walking and cycling, on gateways at the entrances of nature areas (Beunen *et al.*, 2008). The latter approach may avoid or at least reduce car traffic impact and scattered parking within vulnerable and sensitive areas.

For a successful implementation of RTM specific knowledge and supporting research is necessary. Not surprisingly, the character of this knowledge changed with the development of RTM. In the phase till the 1970s, when RTM was still absent, this knowledge focused on technical information about the facilities itself: how many roads to facilities and how wide the road's pavement, which parking capacity, etc. In the 1970s for the development of the "green stars" special transportation studies were made, including prognoses of recreational traffic flows based on modelling. The basic information used for modelling, for example on trip generation and model split, was not case-specific, but based on general figures on a national scale. (See, for example, Dorschkamp & Stiboka, 1971). As the government "knew what was good for their people" no information was gathered considering the role of the recreant and his/her specific desires. And so the multifaceted society was neglected. Only in the 1990s the recreant became more visible for policymakers. Policymakers realise then the recreants' multiformety and accept that they will make different choices. In this phase RTM becomes above all a responsibility of regional and local governments, leaving a more distant and serving role to the national government. (See, for example, KpVV (2006), offering a bundle of successful practical examples of RTM as suggestion and inspiration for local governments). It becomes clear that for realistic plans two different kinds of knowledge are needed: about the recreational use of the area, the wishes and demands of the recreants and about (local) actors involved (Regnerus *et al.*, 2007). A way to reach this is the monitoring of the recreational use of a tourism destination through a counting programme (both mechanical

and visual) and visitor surveys. An actor analysis will give insight into the actors involved, their interdependency and their opinion about problems and possible solutions.

4. Discussion: lessons from the past and how to deal with future challenges?

Lessons from the past

From the developments as sketched in the previous sections we can learn three lessons for the present and the near future: (1) on the style of RTM; (2) on the scale of RTM; and (3) on the changing role of knowledge.

The shift in RTM from an approach based on steering and control to a more influencing one, as sketched before, was not accidental. It fits in a spirit of the time with more attention for the multifaceted society and a focus on personal responsibility, leaving more or less the ideas and ambitions of a “malleable society” behind. For an influencing approach RTM needs a basis of specific desires of individual recreants. This is contrary to general figures of aggregated groups for application nationwide as used in the preceding phase of steering and control. Individual desires generally will show a wide spectrum of ideas and considerable mutual differences. As a consequence, developed RTM measures should be tailor made to the place and the public.

Related to the foregoing, there is also a shift in geographical scale: from RTM on a national level to regional and local governments. Regional and local authorities are in a better position to investigate specific desires and to design tailor made solutions.

Likewise related to the foregoing, the role of knowledge has changed. Firstly, there is the major shift from generic data to site-specific and detailed data. Generic data was more often than not focusing on technical design, and uniformly used on a national scale. Site-specific data includes information on the local recreational use and about the desires of the recreants (Cope *et al.*, 1999). Within this context, the necessity of a long-term monitoring of the recreational use of specific facilities, including the belonging traffic flows, is emphasised (Loomis, 2000). Secondly, the insight that different actors are involved in the decision-making process about RTM and taking into account the interdependency of these actors proved to be an eye opener to design more realistic plans for RTM (Regnerus *et al.*, 2007).

Three future challenges for RTM

Planning and managing future rural recreational traffic flows face many challenges. First, there is tension between facilitating growing flows and preventing for unacceptable impacts. Second, the related problems need a wider framework because tourism has become an important way to improve the economic situation at the countryside. Third, planning and management should be considered within the context of a “living landscape”. As a consequence, RTM may have somewhat different faces.

1. RTM and “greening of the transport”

Recent Dutch data show that leisure and social activities are important sources of mobility (V&W/AVV, 2005). Nationwide, the share of these motives is 38% of all trips; commuting –a common motive in mobility management- is much lower with 17%. The share of leisure and social activities is 44% of all vehicle kilometres travelled, compared to 25% for commuting. However, 80% of all vehicle kilometres for leisure and social activities are travelled by car, which is a slightly higher percentage than the average for all motives (76%). Considering the distance between urban areas and many popular destinations this is not surprising. However, from a viewpoint of “greening the transport” a shift to sustainable modes of transport is desirable.

Other relevant data for this purpose are provided in the Dutch “Continuous Research on Leisure Spending”, the CVTO, focussing on daily leisure activities outside the dwelling and a length of at least one hour. From April 2006 till April 2007 the Dutch undertook 4 milliards of such activities (trips). One quarter of the trips were classified as ‘outdoor recreation’, a cluster with activities such as walking, cycling, and driving for pleasure. The majority of recreational walks (80%) and cycling trips (90%) starts at home. These outcomes include that 20% of the pedestrians and 10% of the cyclists go by car to the area of their interest.

For greening the transport RTM may interact on these figures in three ways: (1) increasing the already high percentages starting at home; (2) increasing the share of walking and cycling at the expense of driving for pleasure by car for outdoor recreational activities; (3) tempting car drivers to park their car on gateways at the edge of their destination area and to continue there on foot or by bicycle in stead of driving by car.

2. RTM in a wider framework

In the Netherlands, there is a growing awareness that issues of countryside recreation, nature conservation, and social and economical liveability are interrelated. As a consequence, tackling the problem of recreational car traffic in the countryside needs to be placed into a wider framework. This implies that beside the manager of the site also local and regional authorities, inhabitants, people from the local tourist industry, *etc.* get involved in the planning and decision-making processes for RTM. All these actors have different ideas about the area and about what should happen in the future. The processes are further complicated by somewhat paradoxical aspects of RTM: it might be necessary to reduce or relocate car traffic within natural areas, but it’s equally important to maintain accessibility and to attract visitors to local (tourism) businesses (Curry, 1994; Regnerus *et al.*, 2007). Even for nature conservation organizations this dilemma plays a role: on the one hand these organizations protect nature areas, but on the other hand they need visitors in order to show nature and to gain support for their work.

RTM may hook here with an integral approach of the road network, considering environmental, economic and safety issues and including an actor analysis. A clear distinction between roads with (mainly) a traffic flow function and roads with an access function only – as usual in traffic safety studies- can be helpful.

3. RTM in a “living landscape”

A further complication for planning and management of rural recreational traffic flows in densely populated industrialised countries, as, for example, in Western Europe, is that these areas are often part of a “living landscape” with many different land uses. People live and work here also outside the tourism sector and the area roads are used not only by visitors but also by utilitarian local bound and through traffic. The planning of tourism destinations is gaining more and more attention, but may easily forget that in many regions also other industries, not related to the tourism sector, play an important role in the local economy. Those industries may have different claims on the local road network, for example regarding legal speed limits and temporary road closures.

In living landscapes, even more than in predominantly recreational areas, an integral approach of RTM is needed, including stakeholder participation.

RTM dealing with these future challenges

To deal with these three challenges RTM needs to include two different approaches: (1) for greening the transport and (2) for an integral approach of the road network.

Greening the transport for the whole activity may be achieved by better connections between the dwellings and their green environment. Especially in situations where barriers by bundles of major infrastructure hinder the accessibility of a nearby rural area for walking and biking considerable improvements can be achieved by making these barriers traversable. (See, for example, Bakker *et al.* (2005), illustrating the impacts of railway crossings on rural accessibility). Another possibility is encouraging visitor access to the countryside by public transport. (See, for example, Lumsdon *et al.*, 2006).

Greening the transport at the destination means tempting car drivers to use softer modes for the last part of their recreational trip, and/or to park their car in a gateway in stead of scattered in the area. At the core here are measures like information and communication, organising services and coordinating activities of different partners (EPOMM, 2008). For a successful implementation a thorough knowledge of the area and its users, and the actors involved and their interdependence, need to be considered (Regnerus *et al.*, 2007).

Given the sometimes paradoxical aspects of RTM, tunnel visions and/or mostly easy to implement isolated technical/legal measures on single roads should be avoided, and certainly in areas characterised as “living landscapes”. In stead, an integral approach, taking into account the whole network in a wider area, is desirable to avoid sub-optimum and would-be solutions. For an integral approach of the road network, stakeholder participation is a *conditio sine qua non*. Experiences from implementing traffic safety programmes (see Beunen *et al.*, in preparation) show that it is important to involve local actors from the beginning of the project. Their knowledge about the area and their opinion about relevant problems, either traffic related or not, are important input for the project. It is important to realize and to understand that people involved can have very different views about traffic problems and about possible measures. As a consequence, their expectations differ and also their response to results. Every situation is specific and with that, the required approach depends on the local context in which the local inhabitants with their different opinions play an important role. It is important to realise that these people are the ones who have to experience the RTM and related measures in their daily lives. These people have a strong influence on local politicians. If they do not agree to problem definitions or proposed solutions it is difficult to implement a coherent RTM programme. It is therefore important to know the opinion of local inhabitants about the problems and to manage their expectations towards the process and the results in order to prevent disappointments. This requires a tailor-made process with respect to the perspectives, ideas and expectations of local inhabitants.

5. Conclusions

In section 3 we showed how in the 20th century RTM has developed and has proven to be an instrument to manage growing flows of recreational car traffic and so to avoid the damaging of popular destination areas. In the previous section 4 we took some lessons from the past and sketched future challenges for RTM. To take up these challenges, however, in the future RTM cannot be more like the past:

1. The description of sequential phases of development of RTM shows that approaches characterized by steering, control and restrictions do not work: steering of people is not as easy as presumed.
2. Modern RTM requires knowledge on an adequate geographical and time scale, but this knowledge cannot give certainty among future developments and it cannot guarantee results from several solutions.

3. People operating in the rural area in their free time do not accept control, but people definitely can be tempted by means of specific recreational provisions and options to do the “right” things; as a consequence recreants and their traffic flows can be managed.
4. Standard designs won’t work, but tailor made solutions based on knowledge of the area and its users and considering the interdependency of different actors in the decision-making process will.

However, this conclusion that in the future RTM cannot be more like the past, does not at all mean that RTM has become useless! To the contrary - looking at expected future developments of outdoor recreation at the countryside and related traffic flows, RTM should definitely stay a main issue in the planning for rural tourism and recreation. However, to stay successful RTM needs somewhat different faces allowing for a further greening of recreational traffic flows and a more integral approach of the road network planning, especially in “living landscapes”.

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