Policies to accelerate fuel, technology & behavioural change in transport - results & successes of the Austrian klima:aktiv mobil programme after the first 6 years

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Abstract

There are plenty of concepts and strategies on almost all administrative levels to reduce carbon emissions and boost energy efficiency in transport.

But it usually takes a long time to adapt national and regional legislation to these strategies with considerable loss of valuable time. Furthermore some of the defined measures will never find the necessary "political will" for implementation.

To bridge this gap Austria's Environmental ministry supported by the Austrian Energy Agency, got into action in 2005 and set up an action programme, bundling all so called "soft" and "voluntary" measures in transport ("mobility management"), that do not necessarily need to wait for legislation or specific administrative framework conditions.

In its comprehensive nation-wide and long term (2004 to at least 2012) approach -not only transport is targeted, but also buildings, renewables and energy saving- and also in its effects regarding the reduction of GHG emissions, klima:aktiv and especially klima: aktiv mobil seems to be one-of-a-kind in Europe. The costs per year are about 2 to €3 Mio, including thematic programmes, public awareness raising campaigns and management, the geographical scope is Asutria.

klima:aktiv mobil set up:

• free-of-charge consulting programmes addressing specific target groups (companies, cites & municipalities, real estate developers, schools & youth, tourism)

- a financial support programme with €33 Mio since 2007 for mobility management measures, fleet conversions to lowcarbon technologies, work travel plans etc.
- an EcoDriving training programme with up to now 17,000 trainees and educating all novice drivers in Austria in a smart driving style
- a broad awareness raising campaign
- more then 1,500 klima: aktiv partners among the target groups as above implementing sustainable transport measures

The target of klima:aktiv mobil, set in the National climate Strategy, was to reduce 300,000 tons of CO₂ per year until 2009. With now more than 400,000 tons of CO₂ emissions reduced every year, the programme exceeded this goal and furthermore created or saved 2,300 "green jobs" in transport and induced "green" investments by companies and administrations 6 to 10 times higher as the funding.

An evaluation shows that klima:aktiv mobil is one of the main drivers in Austria to accelerate fuel, technology & behavioural change in transport and shows a cost/benefit ratio much better than most infrastructure investments.

klima:aktiv - the Austrian initiative for climate protection

klima:aktiv mobil is part of the eight-year klima:aktiv initiative for active climate protection and one of the central strategies to make the transport sector more energy efficient and environmentally friendly by targeting all relevant stakeholders. "Soft measures" are bundled with fuel switching and modal shift.

(Anable, J. et al)1 give a definition of "soft measures in transport": Soft measures usually seek to give better information and opportunities which affect the free choices made by individuals, mostly by facilitating attractive, relatively uncontroversial, and relatively cheap alternatives. They include initiatives such as school and workplace travel plans, personalised journey planning, car clubs, public transport information and marketing and teleworking.

klima:aktiv is the umbrella brand for the voluntary measures of the Austrian climate strategy. Since 2004, the climate protection initiative of the Environmental ministry has been successfully complementing regulations and subsidy schemes in the area of climate protection. klima:aktiv also supports the activities and efforts of partners in the federal provinces and the industry. It is conceived as a market transformation programme. As such it is an innovative add-on to common instruments of the Austrian Climate Strategy introducing target-group oriented programmes in the areas of energy efficiency, buildings, transport, and renewable energy sources, mostly as "add-on" to existing local and regional activities.

The activities of the klima:aktiv focus on key areas by offering consulting and further training initiatives in various fields, establishing clear and transparent standards, taking quality assurance measures, and by actively motivating and bringing together relevant stakeholders.

Before klima:aktiv has finally been rolled out the implementation process was accurately planned and started with the identification of key problems and key players/target groups. After the successful start of model schemes and pilot projects, the eventual roll out with wider implementation of successful measures was planned. At that point the action programme klima:aktiv mobil to address the transport sector was designed.

The transport programme was thoroughly planned around the following key points:

- targeting reduction of GHG emissions/CO,
- tailor-made for specific target groups
- mid to long term perspective 2004-2012
- double strategy consulting and financial support, extended to motivation, certification and awards as well as (further) education and training
- partnership principle
- target-oriented operative implementation

Like in other European states it became clear during the 1st decade of the new millenium, that all the "high level" concepts and plans (energy and climate strategies, to name but a few) miss - or at least do not primarily target - an important part when it comes to energy efficiency: market transformation towards energy efficiency, meaning incremental rather than sudden/ radical change, meaning working with multipliers rather than with small partners "one-by-one", meaning bridging a certain gap between efficient behaviour and new, sustainable technology. Measures bound to legal or fiscal framework conditions have been defined in the "high level" concepts and are of course important, but their implementation takes quite some time, be it in transport or any other sector. Furthermore, some of the defined measures will never find the necessary "political will" for implementation.

On the other hand, so called "soft measures" (such as awareness raising, and mobility management not targeting the infrastructural "givens" but the use and the user of transport infrastructure, demand side management etc) are part of these strategies and concepts as well, but sometimes with insufficient establishment. Therefore a handful of dedicated Austrian energy efficiency experts prepared a programme to back-up the "high level" strategies, bundling all the "soft measures" and aiming at market transformation. The Austrian Energy Agency and members of the Environmental ministry got into action in 2003 and formed an action programme, combining all so called "soft" and "voluntary" measures in energy efficiency, that do not necessarily need to wait for legislation or specific administrative framework conditions such as higher taxes on fossil fuels or a "sustainability" law on the combination of transport and spatial planning. At that time this was for all sectors, not only transport, and finally resulted in the klima:aktiv programme, which is still running, with considerable success.

In its comprehensive approach, not only transport is targeted, but also buildings, renewables and energy saving. In its effects regarding the reduction of GHG emissions, klima:aktiv and especially klima:aktiv mobil seems to be one-of-a-kind in Europe with the overall objective to introduce and promote climate friendly technologies and services. Doing so, klima:aktiv changes both Austria's economy and its everyday life.

KLIMA:AKTIV AND ITS COMPREHENSIVE APPROACH

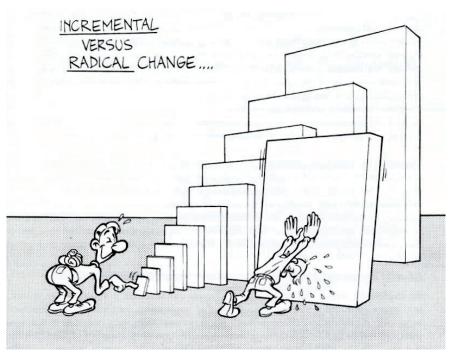
In Figure 2 the structure of klima:aktiv (and "mobil") is shown. The klima:aktiv management tenders programme managers for the thematic programmes and usually awards contracts for two or four years. Nevertheless, a contract can be terminated anytime and budgets are reallocated every year.

klima:aktiv mobil - transport as one layer of klima:aktiv

In the transport sector the approach was quite similar to klima:aktiv as a whole: carefully chosen and well financed pilot cases and sound studies have been carried out, among them mobility management for a limited number of companies, called "soft mobility partnership", two "soft tourism" resorts and an exemplary "traffic saving municipality" (setting a wide range of sustainable transport measures). These pilots have been thoroughly evaluated and analyzed to form action programmes, aiming at the most promising target groups. Furthermore, the potential carbon savings from MM programmes for certain target groups have been identified. Eventually, these analyses and potentials formed the klima:ktiv mobil programmes, launched in 2004 by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, supported by the Chamber of Commerce, the Association of Cities and Towns and the Association of Municipalities and managed by the Austrian Energy Agency.

With activities in five fields (MM consulting programmes, awareness & information campaigns, financial support pro-

^{1.} Anable, J. and Kirkbride, A. and Sloman, L. and Newson, C. and Cairns, S. and Goodwin, P. (2005) Soft measures - soft options or smart choice? Presented at: 37th Conference of the Universities Transport Studies Group, Bristol.



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Figure 1. Market transformation within klima:aktiv.



Figure 2. Structure of klima:aktiv.

grammes, partnership & awards, advanced education & certification; see Figure 4: Five layers of klima:aktiv mobil) klima:aktiv mobil targets all the issues raised in energy efficiency discussions in transport such as fuel-, technology- and behavioural transitions, new business models for car use and ownership, electric mobility and other alternative fuels and drivetrains, mobility management, urban and regional planning, further education and empowering regarding sustainable transport issues etc.

klima:aktiv mobil aims at supporting actions conducted by specific target groups, each group being concerned by a specific programme on mobility management (MM): public administrations and companies, schools and youth, local authorities, leisure and tourism, real estate developers and investors in the

building sector as well as individual drivers with respect to Eco-

The klima:aktiv mobil programmes motivate and support transport stakeholders and actors to develop and implement measures to reduce GHG emissions from their transport and mobility activities promoting alternative clean fuels and vehicles as well as environmentally friendly transport modes and mobility management (MM) while at the same time increase transport efficiency and stimulating energy saving and renewables. Voluntary organisations may benefit from five different supporting measures: consulting & advice in the definition and conduct of action plans; "motivation" through awareness raising and information campaigns; financial support; partnerships & awards for exemplary projects realised within the klima:aktiv

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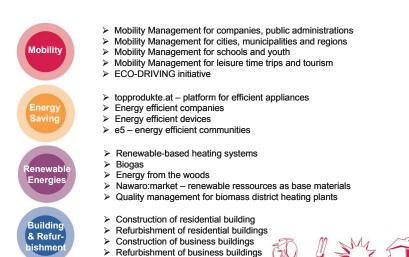


Figure 3. Programs in klima:aktiv.

mobil programmes and training, advanced education certification. The defined stakeholders in klima:aktiv mobil are companies and public administrations, cities, municipalities and regions, the leisure and tourism sector, real estate developers and investors in the building sector, schools and youth, press/ media as opinion makers and citizens as road users/traffic participants and consumers

A specific aspect of the klima:aktiv mobil initiative is that it emphasises synergies between environment and economy as well as between different administrative levels such as the federal government, provinces, cities, municipalities and regions. Since the beginning, the initiative is being supported by the Chamber of Commerce, the Association of Cities and Towns and the Association of Municipalities. Furthermore the initiative has excellent co-operations with numerous Austrian provinces. In Upper Austria the initiative works closely with the province programme "Klimarettung" (climate saving). In Salzburg it cooperates with the "Umweltservice Salzburg" (environmental service). In Vorarlberg they work together with "Vorarlberg mobil", the province platform. Close co operations in the cycling sector exist with Lower Austria, Styria and Tyrol. The initiative strengthens and adds on to already existing activities; local and regional activities, regulatory measures, subsidies and taxes. It serves as an Austrian wide platform and is the catalyst for concrete climate protecting projects.

After six years of operation, the initiative has achieved successful results. More than 1,500 klima:aktiv mobil project partners are already reducing more than 400,000 tons of CO, per year with their projects.²

The initiative is planned to run until the end of 2012.

FIVE LAYERS OF KLIMA: AKTIV MOBIL

Figure 4 outlines the five layers embedded in klima:active mobil. The core initiatives are the mobility management consulting programmes for specific target groups. Programme managers consult companies, municipalities, schools etc. free of charge to fix a package of CO₂ reducing measures in transport. These measures are agreed on in a binding target agreement,

signed by the respective partner, by the programme manager and the strategic control level of klima.aktiv mobil in the environmental ministry. The contract with programme managers contains certain targets to be achieved, among them tons of CO, that have to reduced after a certain period by signed target agreements with measure implementers/partners. If a programme managers has not achieved to fulfil the goals after the contract period, contractual penalties have to be paid.

The consulting programmes are accompanied by **financial** support programmes, where project implementers can apply for subsidies when implementing their MM measures. This programme was introduced in 2007 and since then brought a real boost to klima:aktiv mobil.

The third layer is awareness raising & information campaigns, targeting the wider public via the media.

In the earlier stages, when the first projects have been carried out by implementers -and financial support was still missing except free of charge consulting- it became clear, that any kind of recognition would help to broaden and strengthen the initiative. Thus implementers became partners and got awards for implemented measures and certificates for completed trainings (partnership & awards).

To help ensure a durable impact of klima:aktiv mobil even beyond its planned end 2012, (advanced) education & certification will play a crucial role. Therefore the initiative came up with training programmes e.g. in Eco Driving, mobility management or repairing e-bicycles.

MOBILITY MANAGEMENT (MM) CONSULTING PROGRAMMES

MM for companies & public administrations

Companies and administrative bodies are offered free expert consulting to develop sustainable company related transport patterns and solutions. The programme supports businesses in avoiding car trips and replacing them by more sustainable modes and in developing intelligent mobility solutions for commuting (e.g. job tickets), business trips, motor vehicle pools and logistics. Next to companies, especially administrations are a promising target group for sustainable transport measures, especially because of their rather big fleets and their "role model/best practice" function (public opinion leaders). So

^{2.} Calculation of CO2 reductions: see section below

far, some 900 companies and 100 administrations on all levels - local, regional - participated in the programme. Best Practice: Coca-Cola Beverages Austria GmbH replaced 31 dieselengined cars by 31 natural-gas dedicated vehicles. Until 2012 further fleet conversions into more environmentally friendly fleets will be conducted.

Best Practice: The chamber of commerce in Upper Austria offers their employees (in total 333 employees) reduced costs of job tickets with a large discount on the price of individual season tickets. This results in annual savings of 13 t of CO₂ emission. Due to the urge of the chamber of commerce job tickets are now available in every company located in the capital city

MM for cities, municipalities & regions

Regional and local bodies have plenty of possibilities to implement MM measures. By free of charge consulting and help in applying for financial support the programme encourages "traffic-saving" municipalities, mobility centres, shared space solutions, measures for cycling and walking and climate-friendly local supply. Environmentally friendly means of transport are promoted in towns and regions.

Regional mobility centres are set up as regional sustainable transport hubs. Concepts are being worked out to motivate residents to shop nearby as an alternative to big shopping centres way out of town. Initiatives to strengthen local retailers, shop-keepers and local/regional (small-scale) economy are supported. Financial subsidies for sustainable transport measures are granted.

Walking, cycling and public transport, car pooling and car sharing are supported (also financially), be it via infrastructure, information or awareness raising.

Best Practice: The regional association Tennengau in Salzburg has worked out a special schedule in cooperation with the Postbus GmbH and ÖBB (bus fleet and trains run by Austrian Federal Railways) as well as the regional companies. The idea is to offer public transport to employees working in shift. So far, well known companies such as BOSCH, JOHNSON&JOHNSON, SCHLOTTERER, VOGLAUER Möbelwerke, INFOTEAM and the FH SALZBURG support this project which makes up a sum of 2.500 employees that may use that offer. One third has already taken advantage of this system. At that stage, annual savings of 539 t of CO₂ emission have been achieved in the project.

MM for children, parents & schools (formerly schools & youth)

Children and via them their parents, teachers in schools and responsible persons in day care are supported in this programme by advice on healthy alternatives to car trips to and from kindergardens, schools and leisure time activities of children. The programme is aimed at kindergarten and school pupils, nursery and school teachers, parents and local governments to implement sustainable children-related transport solutions. Educational material is spread in educational institutions, schools and classes of chosen schools by mobility experts. Local concepts are being worked out, dangerous spots on the way to kindergarten and school are mitigated and alternatives to car trips are discussed and enabled in co-operation with municipalities and police. The programme also spreads the contents of

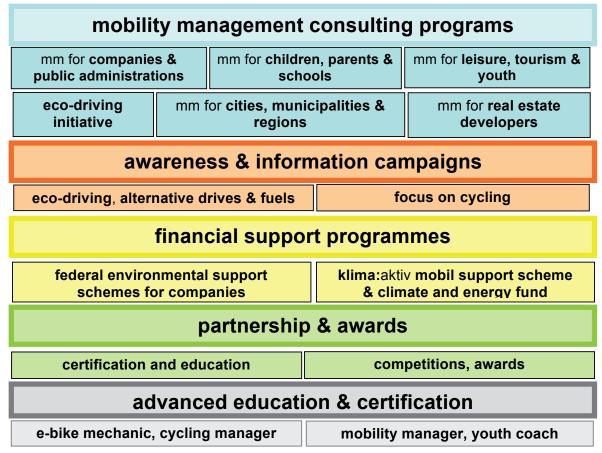


Figure 4. Five layers of klima:aktiv mobil and the respective focal points.

the CEHAPE - Children Environment Health Action Plan for Europe of the World Health Organisation (WHO).

Best Practice: The primary School and the kindergarten Silz put last year's focus on the following themes:

- PediBus accompanied joint walk to school
- Improve traffic behaviour within families
- Car-free policy in front of schools and kinder garden
- Less dangers due to a reduction of cars, traffic calming

MM for leisure, tourism & youth

This ever growing sector is getting more and more important when it comes to carbon emissions from transport, especially in a "tourism" country like Austria. Therefore the programme wants to help reducing greenhouse gas emissions in this sector. Target groups are touristy municipalities and regions, event organisers, public transport companies, tourism boards etc. being aided in offering "soft mobility packages" (car free travel to and from holiday resorts or within the resorts). Offers of "how to get there by public transport", electric bicycles (a real "boomer") or support by the programme when it comes to applications for financial support completes the service.

Youth is a special target group in this context. With "youth mobil trainers" (young people getting qualification in sustainable transport issues), klima:aktiv tries to get in contact with the young at eye level to form their mobility culture towards sustainability.

Best Practice: Within the scope of the UEFA EURO 2008™ the ÖBB & Postbus GmbH (bus fleet run by Austrian Federal Railways) has taken measures to widen public transport by longer operating hours, higher frequency, shuttle busses, special tickets, etc. By offering additional train connections all over the country, training the bus drivers in Eco-Driving and accompanying measures, 16.000 t of CO, emissions were be saved over the whole period of the championship in comparison with if all trips had been made by car.

MM for Real Estate Developers and Investors in the Building Sector

This subprogramme (combined with companies) fosters GHG savings through climate friendly planning and realisation of construction sites (even during the construction phase), GHG abating on-site traffic and good public transport, cycling and walking infrastructures. In this quite difficult field, a legal framework is needed to improve the current situation (shopping malls in midst of nothing with huge parking lots). But this is also exactly the topic where altering the legal framework conditions takes time, thus this klima:aktiv mobil programme again tries to bridge the gap by combining environmental benefits with benefits for the developers (e.g. by reducing the number of parking lots).

Best Practice: Electric vehicles as service vehicles of a big real estate developer in Vienna ("Wiener Wohnen"). As a first action, 80 electric vehicles are being purchased. Hereafter electric vehicles solely will be ordered. At a big building site in Vienna, ground material was transported via train and not lorries. Taking all these measures, the saving is 31 t of CO₂ emissions since e-vehicles replace car trips with conventional fuels and thousands of lorry kilometers were saved.

Eco-Driving-Initiative

The initiative has been started for the establishment of a fuelsaving and smart driving style to enhance fuel economy, by certification of driver trainers, the training of fleets, eco-driving competitions as well as awareness raising among the public. In 2009 eco-driving became a mandatory part when obtaining a driving licence. Thus approximately 90,000 young drivers per year get used to the new and smart driving style in Austria.

Using various platforms the initiative is going public by website the portals www.ecodrive.org and www.spritspar.at, motivational campaigns, e.g. an Austrian wide yearly Eco-Driving competition for car drivers, award ceremonies, symposiums, special trainings and workshops, presence at venues and fairs and special exhibitions.

Best Practice - All 2.800 bus drivers of ÖBB-Postbus GmbH and 4,600 train drivers of the Austrian Federal Railways have been trained in Eco-Driving. Due to this measurement 4.6 %, resp. 1,9 Mio l. diesel p.a. have been saved, making up a total a saving of 5,000 tons CO₂/year.

Table 1 shows an overview of some best practice examples from the different MM programmes with the overall CO₂ emissions savings per programme:

AWARENESS & INFORMATION CAMPAIGNS

During the years varying motivation campaigns (e.g. the "klima:aktiv mobil tour 2010", fuel efficient driving and environmentally friendly mobility - Eco-Driving, alternative fuels & drives and cycling campaigns) have been run within klima:aktiv mobil. The yearly budget share of the campaigning lies between 900,000 and €1.7 Mio, Austrian wide media coverage guaranteed.

Example of the cycling campaign 2008:

"Laß die Wadeln auch im Alltag radeln" has been a Federal cycling promotion initiative. Varying incentives and instruments have been combined aiming at a higher awareness of cycling as environmentally and healthy mode of transport among consumers but also politicians. A specific cycling focus in financial support programmes was combined with a focus on cycling plans, infrastructure & investments plus highlighting benefits for health & environment and a closerco-operation with provinces & municipalities.

Public relations work to popularise the campaign included the "bike2business - countrywide competition for cyclingfriendly companies", newspaper ads & articles, TV- und cinema commercials, bicycle activities and events throughout Austria and the branding of unique "klima:aktiv mobil" bicycles.

Other features used for communication:

A special exhibition called, "CLIMATE-FRIENDLY MOBIL-ITY – Ideas for the future of transport" was presented between June and October 2008 in the Technical Museum Vienna. This exhibition developed by klima:aktiv mobil and the museum presented ways and means towards environmentally-friendly mobility. The exhibition featured descriptive and interactive approaches towards an environmentally friendly future in transport. It focused on climate protection, on ecological en-

Table 1: Best Practice examples from klima:aktiv mobile.

Best Practice examples	Main measure taken	CO ₂ savings achieved tons/year	Calculation base	MM programme	Overall CO ₂ savings in programme in tons/year (as of Feb 2011)
Coca-Cola Beverages Austria	replacement of 31 diesel-engined cars by CNG vehicles	29	fuel switch	MM for companies & public administrations	220,000
Chamber of commerce Upper Austria	job tickets	13	modal switch (less car kms)	MM for companies & public administration	220,000
Wiener Wohnen	replacement of 80 diesel cars by electric vehicles	31	fuel switch, mode switch (car to e- bike)	MM for real estate developers ¹	11.200
Region Tennengau	pt schedule adapted to shift workers	539	modal switch (less car kms)	MM for cities, municipalities, regions	85,000
Primary school Silz	PediBus, car-free policy in front of schools	not evaluated yet	modal switch	MM for children, parents & schools	not evaluated yet
UEAF EUO 2008	pt schedule adoptions all over AT, special tickets, Eco Driving trainings	16,000	modal switch, less fuel	MM for leisure, tourism & youth	47,000
ÖBB and Postbus	Eco Driving trainings	5,000	less fuel	Eco Driving initiative	50,000

¹MM for real estate developers is a sub-programme of MM for companies & public administrations

gines and prototypes, which already exist, on efficient mobility management, and on solar mobility and was visited by well over 100,000 people.

FINANCIAL SUPPORT PROGRAMME KLIMA: AKTIV MOBIL

The government provides about 10 to €12 million/year for subsidizing sustainable transport measures implemented by partners in the various target groups of klima:aktiv mobil.

This financial support for mobility management projects plays a central role within the initiative, offering financial support to companies, federal provinces, cities and municipalities when adopting fleets to alternative fuels and drives, when setting measures to encourage cycling and for climate friendly mobility management such as mobility centres, local buses and innovative ideas regarding public transport.

Since the start of the funding programme in 2007, about 1,000 projects have been filed in and handled by the advisory committee, consisting of members from the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, the Chamber of Commerce, the Association of Cities and Towns and the Association of Municipalities as well as representatives from the provinces. It supports the evaluation process of the filed in projects.

Since 2007 about 600 projects have received financial support. In total about €30 Mio subsidies were approved, which induced a total investment volume of about €180 Mio in Austria. 18 % of the funding was invested for mobility management in companies, 32 % went to federal provinces, cities and municipalities, 33 % of the financial support was invested in the mobility management of cycle traffic and a share of 17 % went to the Mobility Management for leisure and tourism. This investment allows a yearly reduction of almost 100,000 tons of CO, per year (see details in the calculation section below).

With 2009 klima:aktiv started to grant flat-rate-support for certain purposes (electric bicycles, electric charging stations, alternatively propelled vehicles) in order to shorten the period from application to granted funds.

But klima:aktiv mobil is more than that: it also is a job creator: By e.g. supporting the construction of cycling infrastructure or mobility centres, every Euro spent by klima:aktiv mobil induces some 10 Euros spent by regional and local administrations or companies.

Furthermore, some 60 people are directly working fort the implementation of klima:aktiv mobil in the strategic coordination - Ministry, in the Austrian Energy Agency - management and in the programme managements & awareness raising campaigns - consulting actors to implement concrete measures and targeting the end-user. Another 15 to 20 persons are indirectly involved via regional and local administrations, cooperation with klima:aktiv mobil.

When this support programme started in May 2007, carbon saving projects within klima:aktiv mobil were really boosted. The target groups were well "prepared" by the consulting programmes (that started in 2005). With the additional possibility of financial support klima:aktiv mobil got more and more partners ("multipliers" and "implementers") which in the first phase of the financial support programme led to long waiting times and some frustration. After a while the funding structures could be adapted according to the needs of the beneficiaries. Since then, the klima:aktiv mobil financial support programme is stimulating environment and economy: Funding induces up to ten times higher private investments in infrastructure and environmental technologies, supporting Austrian companies and municipalities and causing their positive environmental effects entirely in Austria.

The klima:aktiv mobil programme and its investments not only help the environment but also the economy as it is ena-

Reduction of CO₂-emissions [to/year] achieved by klima:aktiv mobil projects

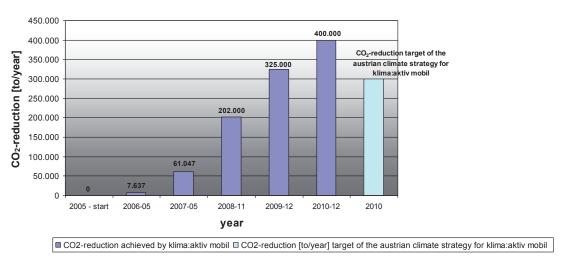


Figure 5. Reduction of CO, emissions by klima:aktiv mobil.

bling companies to save emissions as well as costs and play an important role in stimulating the economy as well as saving jobs. e.g. about €30 Mio of financial support creates and saves about 2,300 jobs.

PARTNERSHIP & AWARDS - COMMITMENT TO CLIMATE **PROTECTION**

Building partnerships with actors relevant for transport focusing on climate protection actions in the transport sector is a core element of klima:aktiv mobil. Projects that are realised within the klima:aktiv mobil programmes are rewarded by the environmental minister for their exemplary work regarding the reduction of CO₂. For most of the partners/implementers, these awards count quite a lot for they mean positive, "green" image and help to get further support and funding for sustainable mobility projects.

ADVANCED EDUCATION & CERTIFICATION

Like the other sectors of klima:aktiv (buildings, energy efficiency, renewable energy) klima:aktiv mobil develops and offers standardized trainings and further education packages such as

- Youth mobility trainers
- **Eco-Driving trainers**
- Sustainable mobility for teachers
- Sustainable mobility for public administrations
- Electric bicycle mechanics

The general aim is to empower the trainees to set measures themselves, to start new initiatives and to maintain existing projects in the line of klima:aktiv mobil, be it in enterprises, municipalities, touristic resorts, schools or youth groups.

CALCULATION OF CO, REDUCTIONS IN KLIMA: AKTIV MOBIL

The carbon reductions are calculated "bottom-up", that means for every single project. The calculation is done by the federal funding agency for klima:aktiv (Kommunalkredit Public Consulting, a bank owned by the state), in case a project gets financial support or by the programme management, if a project is carried out without financial subsidies but with klima:aktiv mobil consulting. Thus, this is not a "top-down approach", but a very detailed "one-by-one" calculation of each project or measure which, is then summed up to a total.

Basically, the calculation is dependent on fuel switch, mode switch and/or the reduction of the mileage of motorized vehicles, cars, lorries etc.) achieved by setting a certain measure (see Table 1). The Austrian Federal Environmental Agency provides the official data needed for these calculations (e. g. "grams of CO, per vehicle and person km" for petrol, diesel, average fleet, CNG vehicles, bio diesel and all the other alternative fuels and drivetrains). Together with the implementing partner, the federal funding agency and the programme management defines number, mileage and type of vehicles (old and new in case of a fleet conversion) and calculates the savings. For the target of the whole programme are CO, savings, this is done in kg/tons of CO, per year, but - for instance - could also be done in kWh.

Of course not every project is as easy to calculate as a fleet conversion, but klima.aktiv mobil has developed a broad knowledge data base on data from expert judgements, experiences and evaluations of former projects and other scientific data (such as average national and even regional occupation rates of vehicles for certain trip purposes etc) to be able to use the "best-you-can-get-values" that are available on a national basis for almost all project types, e. g building new cycle infrastructure, offering job tickets or Eco Driving trainings.

The duration for which reductions are calculated on, depend on the type of project or measure, but is generally calculated annually and usually over a decade (except e.g. measures for big, singular events).

Conclusions: Innovation Features of klima:aktiv mobil

klima:aktiv mobil seems to be an unique programme within the European Union. It is outstanding for the well integrated, national climate protection initiative. The initiative has a very well established umbrella brand (klima:aktiv) with noticeable effects on the market structures in all energy and climate relevant sectors. Due to active cooperation with all stakeholders and actors in the traffic sector the initiative achieves a good multiplier effect. Furthermore it is exemplary for its motivational function and the quality is guaranteed by excellent management structures as well as the sound monitoring and reporting.

The initiative is internationally admitted as an instrument for climate policy as the following examples show:

- The innovative character has already been attested by the Wuppertal Institute in Germany. After carrying out a General Evaluation of the whole klima:aktiv programme, regarding fulfilment of overall goals (cost effectiveness, €/ ton CO, reduces etc) as well as possible improvements, the Wuppertal Institute has complimented the initiative for its exemplary partnership model.3
- klima:aktiv mobil serves as a role model in other countries (such as the "effizient.mobil - Aktionsprogramm Mobilitätsmanagement", that started in November 08 in Germany. Expert delegations from countries like The Netherlands or Finland visited the klim:aktiv management during the last years to get an idea of structure and function of the programme.
- klima:aktiv mobil was awarded an EPSA (European Public Sector Award) in 2009 http://www.epsa2009.eu/.
- The French EU presidency (second half of 2008) has chosen klima:aktiv mobil as one best practice example for climate protection initiatives and published it in a report.4
- Due to its innovative character, the initiative has reached international attention and serves as a role model for an integrated, national climate strategy. Other countries, such as Germany, the Netherlands, Switzerland, Finland, and France have shown much interest either in inviting klima:aktiv mobil representatives for presenting the programme (like Switzerland⁵), asking for klima:aktiv mobil to be published (like France/ADEME, see above) or in sending expert delegations to Austria such as The Netherlands and Finland.
- The campaign has already been rewarded by the CEHAPE Best Practice Award, the Green Fleet Award for its exemplary work regarding the reduction of CO₂.

To foster international cross-links, the initiative (and with it Austria) is part of the European platform for mobility management (EPOMM, www.epomm.eu).

The project has been continuously monitored over the last years. As budgets are reallocated every year, the Ministry of Finance takes a close look at the cost/benefit ratio of the whole programme. The following evaluation and monitoring processes have been realised:

- In 2007 a general evaluation of the whole klima:aktiv programme took place, carried out by the German Wuppertal Institute (see above), regarding fulfilment of overall goals (cost effectiveness, €/ton CO₂ reduces etc) and possible improvements.
- Throughout the programme, a monitoring process for every single MM consulting programme takes place, following the Logic model/SMART methodology⁶ (specific, measurable, attainable, realistic, timely) and taking care that targets (tons CO, to be reduced) are fulfilled.
- Each programme is being accounted at the end of each year by the klima.aktiv mobil management within the Austrian Energy Agency. Within this controlling process, every single MM project within the klima:aktiv mobil MM consulting programmes is checked regarding tons CO, reduced by single projects with a CO, monitoring tool and standardised
- After six years of programme implementation, the results appear promising. Actions favoring an improved mobility management have been conducted in more than 1,500 partnership projects within 1,000 companies and public administrations, 170 schools, more than 185 municipal areas and 160 tourism agencies and tourist regions.

These project partners are already reducing more than 400,000 tons of CO, per year with their projects. The biggest part of the carbon reduction results from fleet conversions (a reduction of 130,000 tCO₂/y, around 8,200 alternative vehicles promoted). In 2009 the programme has already exceeded the 300,000 t CO₂/y reduction target determined in the Austrian (Kyoto) Climate Strategy for 2010.

Links

www.klimaaktivmobil.at general web platform www.maps.klimaaktiv.at Austrian map with klima:aktiv mobil partners all over Austria (information on who they are, what they achieved and how much CO, the saved) www.radfahren.klimaaktiv.at platform for promoting cycling www.mobilitaetsmanagement.at logistics and vehicle fleet management

www.spritspar.at tips and training for fuel-saving driving

3. Evaluierung der Klimaschutzinitiative klima:aktiv; Wuppertal Institut GmbH, Dr. Ralf Schüle (Projektleitung), KMU FORSCHUNG AUSTRIA, Wuppertal 2007; http://www.wupperinst.org/projekte/proj/index.html?projekt_id=179&bid=221

^{4.} Energy Efficiency in the European union. Overview and policies of good practices; ADEME, France 2008 (page 39, Focus 15: "The klima:aktiv mobil programme in Austria"); http://www2.ademe.fr/servlet/getDoc?sort=-1&cid=96&m=3&id=581 28&ref=14149&nocache=yes&p1=111

^{5.} ppt presentation by Willy Raimund at "Berichskonferenz Mobilität" of the Swiss Bundesamt für Energie, 4 November 2010, Neuchatel/CH

^{6.} Dr. André Martinuzzi "Logic Models - Entwicklung und Pilotanwendung eines Instruments für das Management von Beratungsprogrammen für Nachhaltiges Wirtschaften"; Wien 2005; http://bach.wu-wien.ac.at/bachapp/cgi-bin/fides/fides. aspx?search=true;project=true;type=project;tid=1460;lang=DE;style=only_con-