Climate-friendly Climate Research

September 2013

Accompanying material for the 2013 JPI CLIMATE Call for Proposals

- Checklist / Climate-friendly climate research
- CFCR Support tool: Accessibility of international train connections
- Accessibility of EU28 Capital Cities from each other by train

The material presented here is based in particular on the JPI CLIMATE CFCR – Climate-friendly Climate Research project, coordinated by the Austrian Alliance of Sustainable Universities. The policy papers are published on the CFCR project can be accessed on the JPI CLIMATE website www.jpi-climate.eu

Checklist / Climate-friendly climate research

In line with JPI Climate's sustainability principle, to consider the challenges of climate change in all activities of JPI CLIMATE, projects are requested to consider their carbon footprint and use of energy and other resources when planning the project.

This checklist provides guidance in terms of existing and applicable courses of actions for research consortia and research programmers on a couple of key issues.

For a more comprehensive and detailed overview, please consult the JPI CLIMATE CFCR Policy Paper#2 on 'Existing Solutions' on the JPI CLIMATE website.

Travel and meetings:

- ☐ Where possible, substitute in-person meetings with virtual meetings using video-/ tele-conferencing technologies
- ☐ Select locations for project meetings that keep distances travelled to a minimum and are easily reachable via public ground transport (e.g. trains) by the highest number of participants
- ☐ In terms of international travel make use of existing (night) train connections that provide a reasonable accessibility to the meeting venue (accessibility level 1 and 2, see CFCR Support tool further below)
- ☐ Locate the venue and time the meetings to account for the accessibility/centrality of the venue as well as arrival and departure times of important train connections (cf. accessibility matrices further below)
- ☐ When organizing international meetings, encourage participants to use (night) trains as mode of long-distance travel to attend the meetings, and supply information on connections.
- ☐ Offset emissions in case air travel or another major carbon emissions source cannot be avoided in terms of a reasonable alternative by the use of existing (international) train connections or other climate-friendly alternatives.
- ☐ Organise virtual and non-virtual meetings in acknowledgement of the UNEP Green Meeting Guide (http://www.greeningtheblue.org/resources/meetings). If these standards cannot be adhered to:
    - o Use energy intensity of meeting location infrastructure as criteria for/against selection of venue
    - o Procure Organic/Regional/Seasonal/Vegetarian food
    - o Use climate friendly accommodation

Office and Infrastructure:

- ☐ Where possible, use of renewable energy sources, in particular green web-hosting, for (virtual) infrastructure
- ☐ Support the principles of sustainable procurement in the organisations of all involved partners, in particular with respect of purchases in the context of the project
- ☐ Keep purchases of office technologies to a minimum, selecting necessary purchases according to environmentally sound principles (i.e. Greenpeace guide to greener electronics)

CFCR Support tool: Accessibility of (international) train connections[1]

A number of studies have investigated the decision criteria for choosing a particular mode of transport. Besides issues such as the frequency and punctuality of a particular connection, duration and direct connections rank as important criteria. When considering night trains as mode of transportation, a rest period (i.e. the time period without changes, departure or arrival) is considered particularly important.

Based on a literature analysis and expert interviews with frequent business travellers the following scheme has been elaborated that classifies European train connections into four accessibility levels from 1 "convenient" to 4 "voluntary" (see table 1 below).

This scheme offers a systematic, transparent and easy-to-apply support tool for individual researchers, research units / institutions and research funders to decide up to which accessibility level a business trip can be expected to be conducted by train or from which accessibility level also other modes of transport (e.g. flights) will be reimbursed.

Due to their different characteristics, daytime and night train travel are distinguished in the scheme. Given the typical rest period that characterises travel by night-train, the maximum travel duration is correspondingly longer, however a core sleeping period should not be disturbed though departures, changes or arrivals. To allow an appropriate time slot for meetings an earliest latest arrival time and earliest departure time (at the meeting venue) has been included into the scheme.

Table 1: CFCR Support tool: Accessibility of (international) train connections

Accessibility levels	1 "convenient"	2 "acceptable"	3 "committed"	4 "voluntary"
Daytime train travel:				
Duration	≤ 7h	≤ 10h	≤16h	≥16h
Earliest departure time	07:00	06.00	-	-
Latest arrival time	20:00	22.00	-	-
Maximum number of changes	1	2	3	-
Night-train travel:				
Duration	≤ 12h	≤ 15h	≤18h	≥18h
Maximum number of changes	0	1	3	-
Time without departure/changes/arrival	0:30 - 05:30	0:30 - 05:30	01:00 - 05:00	-
Maximum number of changes	0	1	3	-
Earliest departure time	17:00	-	-	-
Latest arrival time	10:00	-	-	-

The following decision support matrices are based on the CFCR Support tool displayed in table 1.

[1] Taken from JPI CLIMATE CFCR Policy Paper #2 Climate-friendly Climate Research / Existing Solutions

Accessibility of EU28 Capital Cities from each other by train (combined day and over-night connections)

incl. Bern & Oslo, excl. Athens[2], Nicosia & Valletta

In the below matrix the mutual accessibility of the EU28 member state capitals (plus Bern and Oslo, but excluding Nicosia and Valletta) are displayed. Grey cells mean no existing connection between the given cities.

1 "convenient"	2 "acceptable"	3 "committed"	4 "voluntary"

Based on CFCR Support tool: Accessibility of international train connections (see table 1 above)

From / to	Ams	Ber	Bern	Brat	Bru	Buc	Bud	Dub	Hel	Cop	Lis	Lju	Lon	Lux	Mad	Osl	Par	Pra	Rig	Rom	Sof	Sto	Tal	Vie	Vil	War	Zag	
Amsterdam																												Amsterdam
Berlin																												Berlin
Bern																												Bern
Bratislava																												Bratislava
Brussels																												Brussels
Bucharest																												Bucharest
Budapest																												Budapest
Dublin																												Dublin
Helsinki																												Helsinki
Copenhagen																												Copenhagen
Lisbon																												Lisbon
Ljubljana																												Ljubljana

[2] Greece: no information available

From / to	Ams	Ber	Bern	Brat	Bru	Buc	Bud	Dub	Hel	Cop	Lis	Lju	Lon	Lux	Mad	Osl	Par	Pra	Rig	Rom	Sof	Sto	Tal	Vie	Vil	War	Zag	
London																												London
Luxemburg																												Luxemburg
Madrid																												Madrid
Oslo																												Oslo
Paris																												Paris
Prague																												Prague
Riga																												Riga
Rome																												Rome
Sofia																												Sofia
Stockholm																												Stockholm
Tallinn																												Tallinn
Vienna																												Vienna
Vilnius																												Vilnius
Warsaw																												Warsaw
Zagreb																												Zagreb
	Ams	Ber	Bern	Brat	Bru	Buc	Bud	Dub	Hel	Cop	Lis	Lju	Lon	Lux	Mad	Osl	Par	Pra	Rig	Rom	Sof	Sto	Tal	Vie	Vil	War	Zag	

Accessibility of EU28 Capital Cities from each other by train via day-time travel[3] (incl. Bern & Oslo, excl. Athens[4], Nicosia, Valletta)

From / to	Amsterdam	Berlin	Bern	Bratislava	Brussels	Bucharest	Budapest	Dublin	Helsinki	Copenhagen	Lisbon	Ljubljana	London
Amsterdam		1	2	3	1	4	3	4	4	3	4	4	1
Berlin	1		2	2	2	4	3	4	4	1	4	3	3
Bern	2	2		3	2	4	4	4	4	3	4	3	2
Bratislava	3	2	3		3	4	1	4	4	3	4	2	4
Brussels	1	2	2	2		4	3	3	4	3	4	3	1
Bucharest	4	4	4	4	4		3	4	4	4	4	4	4
Budapest	3	3	3	1	3	4		4	4	4	4	3	4
Dublin	3	4	4	4	3	4	4		4	4	4	4	2
Helsinki	4	4	4	4	4	4	4	4		4	4	4	4
Copenhagen	3	1	3	4	3	4	4	4	4		4	4	4
Lisbon	4	4	4	4	4	4	4	4	4	4		4	4
Ljubljana	3	3	3	2	3	4	2	4	4	4	4		4
London	1	2	2	4	1	4	4	1	4	3	4	4	
Luxemburg	1	2	1	3	1	4	3	4	4	3	4	3	1
Madrid	4	4	4	4	4	4	4	4	4	4	3	4	4
Oslo	4	4	4	4	4	4	4	4	4	2	4	4	4
Paris	1	2	1	3	1	4	3	3	4	3	4	3	1
Prague	3	1	2	1	2	4	1	4	4	3	4	3	3
Riga	4	4	4	4	4	4	4	4	4	4	4	4	4
Rome	3	3	1	3	3	4	3	4	4	4	4	2	3
Sofia	4	4	4	4	4	3	4	4	4	4	4	4	4
Stockholm	4	3	4	4	4	4	4	4	3*	1	4	4	4
Tallinn	4	4	4	4	4	4	4	4	No data	4	4	4	4
Vienna	3	2	2	1	2	4	1	4	4	3	4	1	4
Vilnius	4	4	4	4	4	4	4	4	4	4	4	4	4
Warsaw	3	1	3	1	3	4	2	4	4	3	4	3	4
Zagreb	4	4	3	2	4	4	1	4	4	4	4	1	4

[3] For some cities which are comparatively close to one another (i.e. Berlin-Prague or Vienna-Bratislava) the accessibility of the specific journey is calculated for the afternoon/evening or morning (within the limits of the criteria)

[4] Greece: no information available

From / to	Luxemburg	Madrid	Oslo	Paris	Prague	Riga	Rome	Sofia	Stockholm	Tallinn	Vienna	Vilnius	Warsaw	Zagreb
Amsterdam	1	4	4	1	3	4	3	4	4	4	3	4	3	4
Berlin	2	4	4	2	1	4	4	4	3	4	2	4	1	3
Bern	1	4	4	1	3	4	2	4	4	4	2	4	3	3
Bratislava	3	4	4	3	1	4	3	4	4	4	1	4	2	2
Brussels	1	4	4	1	2	4	3	4	4	4	2	4	3	4
Bucharest	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Budapest	3	4	4	3	1	4	3	4	4	4	1	4	2	3
Dublin	4	4	4	3	4	4	4	4	4	4	4	4	4	4
Helsinki	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Copenhagen	3	4	2	3	3	4	4	4	1	4	3	4	3	4
Lisbon	4	1	4	4	4	4	4	4	4	4	4	4	4	4
Ljubljana	3	4	4	3	3	4	3	4	4	4	1	4	3	1
London	1	4	4	1	4	4	4	4	4	4	3	4	4	4
Luxemburg		4	4	1	2	4	3	4	4	4	2	4	3	3
Madrid	4		4	3	4	4	4	4	4	4	4	4	4	4
Oslo	4	4		4	4	4	4	4	1	4	4	4	4	4
Paris	1	3	4		2	4	2	4	4	4	3	4	3	4
Prague	3	4	4	3		4	4	4	4	4	1	4	2	3
Riga	4	4	4	4	4		4	4	4	No data	4	No connection	No connection	4
Rome	3	4	4	3	4	4		4	4	4	2	4	4	3
Sofia	4	4	4	4	4	4	4		4	4	4	4	4	4
Stockholm	4	4	1	4	4	4	4	4		4	4	4	4	4
Tallinn	4	4	4	4	4	No data	4	4	4		4	4	4	4
Vienna	3	4	4	3	1	4	3	4	4			4	1	2
Vilnius	4	4	4	4	4	No connection	4	4	4	4	4		3	4
Warsaw	4	4	4	4	2	4	4	4	4	4	2	3		3
Zagreb	4	4	4	4	3	4	4	4	4	4	1	4	4	

Accessibility of EU28 Capital Cities from each other via night-time travel[5] (incl. Bern & Oslo, excl. Athens[6], Nicosia, Valletta)

From / to	Amsterdam	Berlin	Bern	Bratislava	Brussels	Bucharest	Budapest	Dublin	Helsinki	Copenhagen	Lisbon	Ljubljana	London
Amsterdam		1	2	3	1	4	4	4	4	3	4	3	2
Berlin	2		2	2	3	4	2	4	4	2	4	3	3
Bern	2	2		3	2	4	4	4	4	4	4	2	3
Bratislava	3	1	2		3	4	2	4	4	4	4	3	4
Brussels	-	2	3	3		4	4	3	4	3	4	3	-
Bucharest	4	4	4	4	4		3	4	4	4	4	4	4
Budapest	4	2	2	-	3	4		4	4	4	4	3	4
Dublin	4	4	4	4	4	4	4		4	4	4	4	1
Helsinki	4	4	4	4	4	4	4	4		4	4	4	4
Copenhagen	3	1	3	4	2	4	4	4	4		4	4	4
Lisbon	4	4	4	4	4	4	4	4	4	4		4	4
Ljubljana	4	3	2	4	3	4	4	4	4	4	4		4
London	2	4	3	4	-	4	4	2	4	4	4	4	
Luxemburg	-	3	-	4	-	4	4	4	4	3	4	4	-
Madrid	4	4	4	4	3	4	4	4	4	4	1	4	4
Oslo	4	4	4	4	4	4	4	4	4	3	4	4	4
Paris	-	2	-	3	-	4	3	4	4	3	4	4	-
Prague	4	-	2	-	2	4	1	4	4	3	4	2	4
Riga	4	4	4	4	4	4	4	4	4	4	4	4	4
Rome	4	3	4	2	3	4	3	4	4	4	4	2	4
Sofia	4	4	4	4	4	1	4	4	4	4	4	4	4
Stockholm	4	3	4	4	4	4	4	4	3*	-	4	4	4
Tallinn	4	4	4	4	4	4	4	4	No data	4	4	4	4
Vienna	2	1	2	-	2	3	-	4	4	3	4	3	4
Vilnius	4	4	4	4	4	4	4	4	4	4	4	4	4
Warsaw	3	-	3	1	3	4	1	4	4	4	4	3	4
Zagreb	4	3	3	3	3	4	4	4	4	4	4	-	4

[5] For some cities which are comparatively close to one another (i.e. Berlin-Prague or Vienna-Bratislava) the accessibility of the specific journey is calculated for the afternoon/evening or morning (within the limits of the criteria)

[6] Greece: no information available

From / to	Luxemburg	Madrid	Oslo	Paris	Prague	Riga	Rome	Sofia	Stockholm	Tallinn	Vienna	Vilnius	Warsaw	Zagreb
Amsterdam	2	4	4	1	3	4	4	4	4	4	3	4	3	4
Berlin	2	4	4	2	1	4	4	4	4	4	2	4	1	3
Bern	4	4	4	2	2	4	2	4	4	4	2	4	3	2
Bratislava	4	4	4	3	2	4	3	4	4	4	-	4	2	3
Brussels	-	4	4	-	3	4	3	4	4	4	2	4	2	4
Bucharest	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Budapest	3	4	4	3	-	4	3	3	4	4	-	4	1	4
Dublin	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Helsinki	4	4	4	4	4	4	4	4	3*	4	4	4	4	4
Copenhagen	3	4	3	3	3	4	4	4	2	4	4	4	4	4
Lisbon	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Ljubljana	2	4	4	2	2	4	2	4	4	4	2	4	4	-
London	-	3	4	-	4	4	4	4	4	4	4	4	4	4
Luxemburg		3	4	-	3	4	4	4	4	4	2	4	3	4
Madrid	4		4	2	4	4	4	4	4	4	4	4	4	4
Oslo	4	4		4	4	4	4	4	2	4	4	4	4	4
Paris	-	2	4		2	4	2	4	4	4	2	4	3	3
Prague	4	4	4	3		4	4	4	4	4	-	4	1	2
Riga	4	4	4	4	4		4	4	4	No data	4	2	4	4
Rome	3	4	4	2	3	4		4	4	4	2	4	4	3
Sofia	4	4	4	4	4	4	4		4	4	4	4	4	4
Stockholm	4	4	-	4	4	4	4	4		4	4	4	4	4
Tallinn	4	4	4	4	4	No data	4	4	4		4	4	4	4
Vienna	3	4	4	3	-	4	2	4	4	4		4	1	4
Vilnius	4	4	4	4	4	2	4	4	4	4	4		3	4
Warsaw	3	4	4	2	1	4	4	4	4	4	1	4		4
Zagreb	3	4	4	2	2	4	4	4	4	4	4	4	4	

* Connection by ferry.