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(¹) Text with EEA relevance

EN

Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.

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⁽¹⁾ Text with EEA relevance

II

(Non-legislative acts)

REGULATIONS

COUNCIL IMPLEMENTING REGULATION (EU) No 1042/2013

of 7 October 2013

amending Implementing Regulation (EU) No 282/2011 as regards the place of supply of services

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax ⁽¹⁾, and in particular Article 397 thereof,

Having regard to the proposal from the European Commission,

Whereas:

(1) Directive 2006/112/EC provides that as from 1 January 2015, all telecommunications, radio and television broadcasting and electronically supplied services supplied to a non-taxable person are to be taxed in the Member State in which the customer is established, has his permanent address or usually resides, regardless of where the taxable person supplying those services is established. Most other services supplied to a non-taxable person continue to be taxed in the Member State in which the supplier is established.

(2) In order to determine which services must be taxed in the Member State of the customer, it is essential to define telecommunications, radio and television broadcasting and electronically supplied services. In particular, the concept of radio and television broadcasting (hereinafter 'broadcasting') services should be clarified, drawing from definitions laid down in Directive 2010/13/EU of the European Parliament and of the Council ⁽²⁾.

(3) To clarify matters, transactions identified as electronically supplied services have been listed in Council Implementing Regulation (EU) No 282/2011 ⁽³⁾, without the list being exhaustive. The list should be updated, and similar lists should be drawn up for telecommunications and broadcasting services.

(4) It is necessary to specify who is the supplier for value added tax (VAT) purposes where electronically supplied services, or telephone services provided through the internet, are supplied to a customer through telecommunications networks or via an interface or a portal.

(5) To ensure the uniform application of the rules governing the place of supply of hiring of means of transport and the place of supply of telecommunications, broadcasting and electronically supplied services, it is necessary to specify where a non-taxable legal person should be considered to be established.

(6) With a view to determining who is liable for payment of the VAT on the supply of telecommunications, broadcasting or electronically supplied services, and taking into account that the place of taxation is the same regardless of whether the customer is a taxable or a non-taxable person, the supplier should be able to determine the status of a customer solely based on whether the customer communicates his individual VAT identification number. This status must, in accordance with the general rules, be amended if such a communication is subsequently made by the customer. If no such communication is received, the supplier should remain liable for payment of the VAT.

⁽¹⁾ OJ L 347, 11.12.2006, p. 1.

⁽²⁾ Directive 2010/13/EU of the European Parliament and of the Council of 10 March 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive) (OJ L 95, 15.4.2010, p. 1).

⁽³⁾ Council Implementing Regulation (EU) No 282/2011 of 15 March 2011 laying down implementing measures for Directive 2006/112/EC on the common system of value added tax (OJ L 77, 23.3.2011, p. 1).

- (7) Where a non-taxable person is established in more than one country or has his permanent address in one country but usually resides in another, priority is to be given to the place that best ensures taxation at the place of actual consumption. To avoid conflicts concerning jurisdiction between Member States, the place of actual consumption should be specified.
- (8) Rules should be established in order to clarify the tax treatment of the supply of hiring of means of transport and telecommunications, broadcasting and electronically supplied services to a non-taxable person whose place of establishment, permanent address or usual residence is practically impossible to determine or which cannot be determined with certainty. It is appropriate for those rules to be based on presumptions.
- (9) Where information is available to determine the actual location at which the customer is established, has his permanent address or usually resides, it is necessary to provide for a presumption to be rebuttable.
- (10) In certain cases where the service is occasional, habitually involves small amounts and requires the physical presence of the customer, such as the supply of telecommunications, broadcasting or electronically supplied services at a wi-fi hot spot or an internet café, or habitually does not give rise to payment receipts or other evidence of the service provided, as is the case with telephone boxes, the provision and control of evidence with respect to the place of establishment of the customer or his permanent address or usual residence would impose a disproportionate burden, or could pose problems of data protection.
- (11) As the tax treatment of the supply of hiring of means of transport and telecommunications, broadcasting and electronically supplied services to a non-taxable person depends on where the customer is established, has his permanent address or usually resides, it is necessary to clarify, in cases for which no specific presumptions are established or for the rebuttal of presumptions, what evidence the supplier should have to identify the location of the customer. To that end an indicative, non-exhaustive list of evidence should be drawn up.
- (12) In order to ensure the uniform tax treatment of supplies of services connected with immovable property, the concept of immovable property needs to be defined. The proximity required for there to be a connection with an immovable property should be specified, and a non-exhaustive list of examples of transactions identified as services connected with immovable property should also be provided.
- (13) It is also necessary to clarify the tax treatment of the supply of services putting equipment at a customer's disposal with a view to carrying out work on immovable property.
- (14) For practical reasons, it should be clarified that telecommunications, broadcasting or electronically supplied services provided by a taxable person acting in his own name in connection with the provision of accommodation in the hotel sector or sectors with a similar function should be regarded, for the purpose of determining the place of supply, as being supplied at those locations.
- (15) In accordance with Directive 2006/112/EC, admission to cultural, artistic, sporting, scientific, educational, entertainment or similar events must in all circumstances be taxed at the place where the event actually takes place. It should be made clear that this also applies where tickets to such events are not sold directly by the organiser, but are distributed through intermediaries.
- (16) Under Directive 2006/112/EC, VAT can become chargeable prior to, at the time of or soon after the supply of goods or services. In relation to telecommunications, broadcasting or electronically supplied services supplied during the period of transition to the new rules on the place of supply, conditions linked to the supply or differences in application between Member States could result in double taxation or non-taxation. In order to avoid that, and to ensure uniform application in Member States, it is necessary to lay down transitional provisions.
- (17) For the purposes of this Regulation, it may be appropriate for Member States to adopt legislative measures limiting certain rights and obligations laid down by Directive 95/46/EC of the European Parliament and of the Council⁽¹⁾ in order to safeguard an important economic or financial interest of a Member State or of the European Union, including monetary, budgetary and taxation matters, where such measures are necessary and proportionate in view of the risk of tax fraud and tax evasion in Member States, and in view of the need to ensure the correct collection of VAT covered by this Regulation.
- ⁽¹⁾ Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (OJ L 281, 23.11.1995, p. 31).

- (18) The concept of immovable property should be introduced in order to ensure a uniform tax treatment by Member States of supplies of services connected with immovable property. The introduction of that concept could have a considerable impact on the legislation and administrative practices in Member States. Without prejudice to such legislation or practices already applied in Member States and in order to ensure a smooth transition, that concept should be introduced at a later date.
- (19) Implementing Regulation (EU) No 282/2011 should therefore be amended accordingly,

HAS ADOPTED THIS REGULATION:

Article 1

Implementing Regulation (EU) No 282/2011 is amended as follows:

(1) Chapter IV is amended as follows:

(a) the following Articles are inserted:

'Article 6a

1. Telecommunications services within the meaning of Article 24(2) of Directive 2006/112/EC shall cover, in particular, the following:

- (a) fixed and mobile telephone services for the transmission and switching of voice, data and video, including telephone services with an imaging component (videophone services);
- (b) telephone services provided through the internet, including voice over internet Protocol (VoIP);
- (c) voice mail, call waiting, call forwarding, caller identification, three-way calling and other call management services;
- (d) paging services;
- (e) audiotext services;
- (f) facsimile, telegraph and telex;
- (g) access to the internet, including the World Wide Web;
- (h) private network connections providing telecommunications links for the exclusive use of the client.

2. Telecommunications services within the meaning of Article 24(2) of Directive 2006/112/EC shall not cover the following:

- (a) electronically supplied services;

- (b) radio and television broadcasting (hereinafter "broadcasting") services.

Article 6b

1. Broadcasting services shall include services consisting of audio and audiovisual content, such as radio or television programmes which are provided to the general public via communications networks by and under the editorial responsibility of a media service provider, for simultaneous listening or viewing, on the basis of a programme schedule.

2. Paragraph 1 shall cover, in particular, the following:

- (a) radio or television programmes transmitted or retransmitted over a radio or television network;
- (b) radio or television programmes distributed via the internet or similar electronic network (IP streaming), if they are broadcast simultaneous to their being transmitted or retransmitted over a radio or television network.

3. Paragraph 1 shall not cover the following:

- (a) telecommunications services;
- (b) electronically supplied services;
- (c) the provision of information about particular programmes on demand;
- (d) the transfer of broadcasting or transmission rights;
- (e) the leasing of technical equipment or facilities for use to receive a broadcast;
- (f) radio or television programmes distributed via the internet or similar electronic network (IP streaming), unless they are broadcast simultaneous to their being transmitted or retransmitted over a radio or television network.;

(b) in Article 7, paragraph 3 is amended as follows:

- (i) the introductory phrase is replaced by the following:

'3. Paragraph 1 shall not cover the following.;

- (ii) point (a) is replaced by the following:

'(a) broadcasting services.;

- (iii) points (q), (r) and (s) are deleted;

(iv) the following points are added:

- '(t) tickets to cultural, artistic, sporting, scientific, educational, entertainment or similar events booked online;
- (u) accommodation, car-hire, restaurant services, passenger transport or similar services booked online.';

(c) the following Article is inserted:

'Article 9a

1. For the application of Article 28 of Directive 2006/112/EC, where electronically supplied services are supplied through a telecommunications network, an interface or a portal such as a marketplace for applications, a taxable person taking part in that supply shall be presumed to be acting in his own name but on behalf of the provider of those services unless that provider is explicitly indicated as the supplier by that taxable person and that is reflected in the contractual arrangements between the parties.

In order to regard the provider of electronically supplied services as being explicitly indicated as the supplier of those services by the taxable person, the following conditions shall be met:

- (a) the invoice issued or made available by each taxable person taking part in the supply of the electronically supplied services must identify such services and the supplier thereof;
- (b) the bill or receipt issued or made available to the customer must identify the electronically supplied services and the supplier thereof.

For the purposes of this paragraph, a taxable person who, with regard to a supply of electronically supplied services, authorises the charge to the customer or the delivery of the services, or sets the general terms and conditions of the supply, shall not be permitted to explicitly indicate another person as the supplier of those services.

2. Paragraph 1 shall also apply where telephone services provided through the internet, including voice over internet Protocol (VoIP), are supplied through a telecommunications network, an interface or a portal such as a marketplace for applications and are

supplied under the same conditions as set out in that paragraph.

3. This Article shall not apply to a taxable person who only provides for processing of payments in respect of electronically supplied services or of telephone services provided through the internet, including voice over internet Protocol (VoIP), and who does not take part in the supply of those electronically supplied services or telephone services.;

(2) Chapter V is amended as follows:

(a) in Section 1, the following Articles are inserted:

'Article 13a

The place where a non-taxable legal person is established, as referred to in the first subparagraph of Article 56(2) and Articles 58 and 59 of Directive 2006/112/EC, shall be:

- (a) the place where the functions of its central administration are carried out; or
- (b) the place of any other establishment characterised by a sufficient degree of permanence and a suitable structure in terms of human and technical resources to enable it to receive and use the services supplied to it for its own needs.

Article 13b

For the application of Directive 2006/112/EC, the following shall be regarded as "immovable property":

- (a) any specific part of the earth, on or below its surface, over which title and possession can be created;
- (b) any building or construction fixed to or in the ground above or below sea level which cannot be easily dismantled or moved;
- (c) any item that has been installed and makes up an integral part of a building or construction without which the building or construction is incomplete, such as doors, windows, roofs, staircases and lifts;
- (d) any item, equipment or machine permanently installed in a building or construction which cannot be moved without destroying or altering the building or construction.;

(b) in Article 18(2), the following subparagraph is added:

‘However, irrespective of information to the contrary, the supplier of telecommunications, broadcasting or electronically supplied services may regard a customer established within the Community as a non-taxable person as long as that customer has not communicated his individual VAT identification number to him.’;

(c) Article 24 is replaced by the following:

‘Article 24

Where services covered by the first subparagraph of Article 56(2) or Articles 58 and 59 of Directive 2006/112/EC are supplied to a non-taxable person who is established in more than one country or who has his permanent address in one country and his usual residence in another, priority shall be given:

(a) in the case of a non-taxable legal person, to the place referred to in point (a) of Article 13a of this Regulation, unless there is evidence that the service is used at the establishment referred to in point (b) of that article;

(b) in the case of a natural person, to the place where he usually resides, unless there is evidence that the service is used at his permanent address.’;

(d) Section 4 is amended as follows:

(i) the following subsections are inserted:

‘Subsection 3a

Presumptions for the location of the customer

Article 24a

1. For the application of Articles 44, 58 and 59a of Directive 2006/112/EC, where a supplier of telecommunications, broadcasting or electronically supplied services provides those services at a location such as a telephone box, a telephone kiosk, a wi-fi hot spot, an internet café, a restaurant or a hotel lobby where the physical presence of the recipient of the service at that location is needed for the service to be provided to him by that supplier, it shall be presumed that the customer is established, has his permanent address or usually resides at the place of that location and that the service is effectively used and enjoyed there.

2. If the location referred to in paragraph 1 of this Article is on board a ship, aircraft or train carrying out a passenger transport operation

effected within the Community pursuant to Articles 37 and 57 of Directive 2006/112/EC, the country of the location shall be the country of departure of the passenger transport operation.

Article 24b

For the application of Article 58 of Directive 2006/112/EC, where telecommunications, broadcasting or electronically supplied services are supplied to a non-taxable person:

(a) through his fixed land line, it shall be presumed that the customer is established, has his permanent address or usually resides at the place of installation of the fixed land line;

(b) through mobile networks, it shall be presumed that the place where the customer is established, has his permanent address or usually resides is the country identified by the mobile country code of the SIM card used when receiving those services;

(c) for which the use of a decoder or similar device or a viewing card is needed and a fixed land line is not used, it shall be presumed that the customer is established, has his permanent address or usually resides at the place where that decoder or similar device is located, or if that place is not known, at the place to which the viewing card is sent with a view to being used there;

(d) under circumstances other than those referred to in Article 24a and in points (a), (b) and (c) of this Article, it shall be presumed that the customer is established, has his permanent address or usually resides at the place identified as such by the supplier on the basis of two items of non-contradictory evidence as listed in Article 24f of this Regulation.

Article 24c

For the application of Article 56(2) of Directive 2006/112/EC, where the hiring, other than short-term hiring, of means of transport is supplied to a non-taxable person, it shall be presumed that the customer is established, has his permanent address or usually resides at the place identified as such by the supplier on the basis of two items of non-contradictory evidence as listed in Article 24e of this Regulation.

Subsection 3b**Rebuttal of presumptions***Article 24d*

1. Where a supplier supplies a service listed in Article 58 of Directive 2006/112/EC, he may rebut a presumption referred to in Article 24a or in point (a), (b) or (c) of Article 24b of this Regulation on the basis of three items of non-contradictory evidence indicating that the customer is established, has his permanent address or usually resides elsewhere.

2. A tax authority may rebut presumptions that have been made under Article 24a, 24b or 24c where there are indications of misuse or abuse by the supplier.

Subsection 3c**Evidence for the identification of the location of the customer and rebuttal of presumptions***Article 24e*

For the purposes of applying the rules in Article 56(2) of Directive 2006/112/EC and fulfilling the requirements of Article 24c of this Regulation, the following shall, in particular, serve as evidence:

- (a) the billing address of the customer;
- (b) bank details such as the location of the bank account used for payment or the billing address of the customer held by that bank;
- (c) registration details of the means of transport hired by the customer, if registration of that means of transport is required at the place where it is used, or other similar information;
- (d) other commercially relevant information.

Article 24f

For the purpose of applying the rules in Article 58 of Directive 2006/112/EC and fulfilling the requirements of point (d) of Article 24b or Article 24d(1) of this Regulation, the following shall, in particular, serve as evidence:

- (a) the billing address of the customer;
- (b) the internet Protocol (IP) address of the device used by the customer or any method of geolocation;

(c) bank details such as the location of the bank account used for payment or the billing address of the customer held by that bank;

(d) the Mobile Country Code (MCC) of the International Mobile Subscriber Identity (IMSI) stored on the Subscriber Identity Module (SIM) card used by the customer;

(e) the location of the customer's fixed land line through which the service is supplied to him;

(f) other commercially relevant information.;

(ii) the following Subsection is inserted:

'Subsection 6a**Supply of services connected with immovable property***Article 31a*

1. Services connected with immovable property, as referred to in Article 47 of Directive 2006/112/EC, shall include only those services that have a sufficiently direct connection with that property. Services shall be regarded as having a sufficiently direct connection with immovable property in the following cases:

- (a) where they are derived from an immovable property and that property makes up a constituent element of the service and is central to, and essential for, the services supplied;
- (b) where they are provided to, or directed towards, an immovable property, having as their object the legal or physical alteration of that property.

2. Paragraph 1 shall cover, in particular, the following:

- (a) the drawing up of plans for a building or parts of a building designated for a particular plot of land regardless of whether or not the building is erected;
- (b) the provision of on site supervision or security services;
- (c) the construction of a building on land, as well as construction and demolition work performed on a building or parts of a building;

- (d) the construction of permanent structures on land, as well as construction and demolition work performed on permanent structures such as pipeline systems for gas, water, sewerage and the like;
 - (e) work on land, including agricultural services such as tillage, sowing, watering and fertilisation;
 - (f) surveying and assessment of the risk and integrity of immovable property;
 - (g) the valuation of immovable property, including where such service is needed for insurance purposes, to determine the value of a property as collateral for a loan or to assess risk and damages in disputes;
 - (h) the leasing or letting of immovable property other than that covered by point (c) of paragraph 3, including the storage of goods for which a specific part of the property is assigned for the exclusive use of the customer;
 - (i) the provision of accommodation in the hotel sector or in sectors with a similar function, such as holiday camps or sites developed for use as camping sites, including the right to stay in a specific place resulting from the conversion of timeshare usage rights and the like;
 - (j) the assignment or transfer of rights other than those covered by points (h) and (i) to use the whole or parts of an immovable property, including the licence to use part of a property, such as the granting of fishing and hunting rights or access to lounges in airports, or the use of an infrastructure for which tolls are charged, such as a bridge or tunnel;
 - (k) the maintenance, renovation and repair of a building or parts of a building, including work such as cleaning, tiling, papering and parqueting;
 - (l) the maintenance, renovation and repair of permanent structures such as pipeline systems for gas, water, sewerage and the like;
 - (m) the installation or assembly of machines or equipment which, upon installation or assembly, qualify as immovable property;
 - (n) the maintenance and repair, inspection and supervision of machines or equipment if those machines or equipment qualify as immovable property;
 - (o) property management other than portfolio management of investments in real estate covered by point (g) of paragraph 3, consisting of the operation of commercial, industrial or residential real estate by or on behalf of the owner of the property;
 - (p) intermediation in the sale, leasing or letting of immovable property and in the establishment or transfer of certain interests in immovable property or rights in rem over immovable property (whether or not treated as tangible property), other than intermediation covered by point (d) of paragraph 3;
 - (q) legal services relating to the transfer of a title to immovable property, to the establishment or transfer of certain interests in immovable property or rights in rem over immovable property (whether or not treated as tangible property), such as notary work, or to the drawing up of a contract to sell or acquire immovable property, even if the underlying transaction resulting in the legal alteration of the property is not carried through.
3. Paragraph 1 shall not cover the following:
- (a) the drawing up of plans for a building or parts of a building if not designated for a particular plot of land;
 - (b) the storage of goods in an immovable property if no specific part of the immovable property is assigned for the exclusive use of the customer;
 - (c) the provision of advertising, even if it involves the use of immovable property;
 - (d) intermediation in the provision of hotel accommodation or accommodation in sectors with a similar function, such as holiday camps or sites developed for use as camping sites, if the intermediary is acting in the name and on behalf of another person;

- (e) the provision of a stand location at a fair or exhibition site together with other related services to enable the exhibitor to display items, such as the design of the stand, transport and storage of the items, the provision of machines, cable laying, insurance and advertising;
- (f) the installation or assembly, the maintenance and repair, the inspection or the supervision of machines or equipment which is not, or does not become, part of the immovable property;
- (g) portfolio management of investments in real estate;
- (h) legal services other than those covered by point (q) of paragraph 2, connected to contracts, including advice given on the terms of a contract to transfer immovable property, or to enforce such a contract, or to prove the existence of such a contract, where such services are not specific to a transfer of a title on an immovable property.

Article 31b

Where equipment is put at the disposal of a customer with a view to carrying out work on immovable property, that transaction shall only be a supply of services connected with immovable property if the supplier assumes responsibility for the execution of the work.

A supplier who provides the customer with equipment together with sufficient staff for its operation with a view to carrying out work shall be presumed to have assumed responsibility for the execution of that work. The presumption that the supplier has the responsibility for the execution of the work may be rebutted by any relevant means in fact or law.

Article 31c

For the purpose of determining the place of supply of telecommunications, broadcasting or electronically supplied services provided by a taxable person acting in his own name together with accommodation in the hotel sector or in sectors with a similar function, such as holiday camps or sites developed for use as camping sites, those services shall be regarded as being supplied at those locations.;

- (iii) in Subsection 7, the following Article is inserted:

'Article 33a

The supply of tickets granting access to a cultural, artistic, sporting, scientific, educational, entertainment or similar event by an intermediary

acting in his own name but on behalf of the organiser or by a taxable person, other than the organiser, acting on his own behalf, shall be covered by Article 53 and Article 54(1) of Directive 2006/112/EC.;

- (3) in point (4) of Annex I, the following points are added:

'(f) receiving radio or television programmes distributed via a radio or television network, the internet or similar electronic network for listening to or viewing programmes at the moment chosen by the user and at the user's individual request on the basis of a catalogue of programmes selected by the media service provider such as TV or video on demand;

(g) receiving radio or television programmes distributed via the internet or similar electronic network (IP streaming) unless they are broadcast simultaneous to their being transmitted or retransmitted over a radio and television network;

(h) the supply of audio and audiovisual content via communications networks which is not provided by and under the editorial responsibility of a media service provider;

(i) the onward supply of the audio and audiovisual output of a media service provider via communications networks by someone other than the media service provider.;

Article 2

For telecommunications, radio and television broadcasting or electronically supplied services supplied by a supplier established within the Community to a non-taxable person who is established, has his permanent address or usually resides there, the following shall apply:

- (a) the place of supply in respect of each chargeable event that occurs before 1 January 2015 shall be the place where the supplier is established, as provided for in Article 45 of Directive 2006/112/EC, regardless of when the supply, or continuous supply, of those services is completed;

- (b) the place of supply in respect of each chargeable event that occurs on or after 1 January 2015 shall be the place where the customer is established, has his permanent address or usually resides, regardless of when the supply, or continuous supply, of those services commenced;
- (c) where the chargeable event occurred before 1 January 2015 in the Member State where the supplier is established, no tax shall become chargeable in the Member State of the customer on or after 1 January 2015 in relation to the same chargeable event.

Article 3

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2015.

However, Articles 13b, 31a and 31b of Implementing Regulation (EU) No 282/2011, as inserted by this Regulation, shall apply from 1 January 2017.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Luxembourg, 7 October 2013.

For the Council

The President

J. BERNATONIS

COMMISSION REGULATION (EU) No 1043/2013
of 24 October 2013
establishing a prohibition of fishing for ling in EU and international waters of V by vessels flying the flag of France

THE EUROPEAN COMMISSION,

HAS ADOPTED THIS REGULATION:

Having regard to the Treaty on the Functioning of the European Union,

Article 1

Quota exhaustion

Having regard to Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy ⁽¹⁾, and in particular Article 36(2) thereof,

The fishing quota allocated to the Member State referred to in the Annex to this Regulation for the stock referred to therein for 2013 shall be deemed to be exhausted from the date set out in that Annex.

Whereas:

Article 2

Prohibitions

(1) Council Regulation (EU) No 40/2013 of 21 January 2013 fixing for 2013 the fishing opportunities available in EU waters and, to EU vessels, in certain non-EU waters for certain fish stocks and groups of fish stocks which are subject to international negotiations or agreements ⁽²⁾, lays down quotas for 2013.

Fishing activities for the stock referred to in the Annex to this Regulation by vessels flying the flag of or registered in the Member State referred to therein shall be prohibited from the date set out in that Annex. In particular it shall be prohibited to retain on board, relocate, tranship or land fish from that stock caught by those vessels after that date.

(2) According to the information received by the Commission, catches of the stock referred to in the Annex to this Regulation by vessels flying the flag of or registered in the Member State referred to therein have exhausted the quota allocated for 2013.

Article 3

Entry into force

(3) It is therefore necessary to prohibit fishing activities for that stock,

This Regulation shall enter into force on the day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 24 October 2013.

*For the Commission,
On behalf of the President,*

Lowri EVANS

Director-General for Maritime Affairs and Fisheries

⁽¹⁾ OJ L 343, 22.12.2009, p. 1.

⁽²⁾ OJ L 23, 25.1.2013, p. 54.

ANNEX

No	58/TQ40
Member State	France
Stock	LIN/05EL
Species	Ling (<i>Molva molva</i>)
Zone	EU and international waters of V
Date	29.9.2013

COMMISSION IMPLEMENTING REGULATION (EU) No 1044/2013

of 25 October 2013

amending Annex IV to Regulation (EU) No 206/2010 as regards the model veterinary certificate for consignments of queen bees and queen bumble bees

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Directive 92/65/EEC of 13 July 1992 laying down animal health requirements governing trade in and imports into the Community of animals, semen, ova and embryos not subject to animal health requirements laid down in specific Community rules referred to in Annex A(l) to Directive 90/425/EEC⁽¹⁾, and in particular Article 17(2)(b) and Article 19(b) thereof,

Whereas:

- (1) Directive 92/65/EEC lays down the animal health requirements governing trade in and imports into the Union of animals, semen, ova and embryos not subject to the animal health requirements laid down in the specific acts of the Union referred to in Annex F thereto.
- (2) Varroosis in bees is listed in Annex B to Directive 92/65/EEC. It is caused by ectoparasitic mites of the genus *Varroa* and has been reported worldwide.
- (3) Commission Regulation (EU) No 206/2010⁽²⁾ lays down the veterinary certification requirements for the introduction of consignments of certain live animals into the Union. Part 2 of Annex IV to Regulation (EU) No 206/2010 sets out the veterinary certificate QUE to be used for consignments of queen bees and queen bumble bees (*Apis mellifera* and *Bombus* spp.).
- (4) Certain territories of Member States have been recognised as free from varroosis by Commission Implementing

Decision 2013/503/EU⁽³⁾. The additional guarantees required in trade laid down in that Decision for the protection of the varroosis-free status of those territories provide that Member States are to prohibit the introduction of consignments of queen bees and their attendants into the Union, where their final destination is a varroosis-free territory.

- (5) The veterinary certificate QUE set out in Part 2 to Annex IV to Regulation (EU) No 206/2010 should therefore be amended accordingly.
- (6) The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on the Food Chain and Animal Health,

HAS ADOPTED THIS REGULATION:

Article 1

In Part 2 of Annex IV to Regulation (EU) No 206/2010, the veterinary certificate QUE is replaced by the text set out in the Annex to this Regulation.

Article 2

For a transitional period until 30 May 2014, the introduction into the Union of consignments of bees referred to in Article 7(3)(a) of Regulation (EU) No 206/2010 accompanied by a veterinary certificate completed and signed in accordance with model QUE set out in Part 2 of Annex IV to Regulation (EU) No 206/2010, in its version before the date of entry into force of this Regulation, shall be authorised.

Article 3

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

⁽¹⁾ OJ L 268, 14.9.1992, p. 54.

⁽²⁾ Commission Regulation (EU) No 206/2010 of 12 March 2010 laying down lists of third countries, territories or parts thereof authorised for the introduction into the European Union of certain animals and fresh meat and the veterinary certification requirements (OJ L 73, 20.3.2010, p. 1).

⁽³⁾ Commission Implementing Decision 2013/503/EU of 11 October 2013 recognising parts of the Union as free from varroosis in bees and establishing additional guarantees required in intra-Union trade and imports for the protection of their varroosis-free status (OJ L 273, 15.10.2013, p. 38).

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 25 October 2013.

For the Commission
The President
José Manuel BARROSO

ANNEX

Model QUE

COUNTRY

Veterinary certificate to EU

Part I: Details of dispatched consignment	I.1. Consignor Name Address Tel.		I.2. Certificate reference No		I.2.a.			
			I.3. Central competent authority					
			I.4. Local competent authority					
	I.5. Consignee Name Address Postal code Tel.		I.6.					
	I.7. Country of origin	ISO code	I.8. Region of origin	Code	I.9. Country of destination	ISO code	I.10. Region of destination	Code
	I.11. Place of origin Name Address		Approval number		I.12. Place of destination			
	I.13. Place of loading Address		Approval number		I.14. Date of departure			
	I.15. Means of transport Aeroplane <input type="checkbox"/> Ship <input type="checkbox"/> Railway wagon <input type="checkbox"/> Road vehicle <input type="checkbox"/> Other <input type="checkbox"/> Identification Documentary references		I.16. Entry BIP in EU		I.17. No(s) of CITES			
	I.18. Description of commodity				I.19. Commodity code (HS code) 01.06.41		I.20. Quantity	
	I.21.				I.22. Number of packages			
	I.23. Identification of container/seal number				I.24.			
	I.25. Commodities certified for: Breeding <input type="checkbox"/>							
	I.26.				I.27. For import or admission into EU <input type="checkbox"/>			
I.28. Identification of the commodities Species (scientific name)								

COUNTRY **Model QUE**

II. Health information	II.a. Certificate reference number	II.b.
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Part II: Certification

II.1. Animal Health attestation

I, the undersigned, hereby certify, that the animals referred to in Part I of this certificate meet the following requirements:

II.1.1. they come from the territory with code: ⁽¹⁾ in which, American foulbrood, the small hive beetle (*Aethina tumida*) and the Tropilaelaps mite (*Tropilaelaps* spp.) are notifiable diseases/pests.

II.1.2. they:

- (a) come from a breeding apiary, which is supervised and controlled by the competent authority;
- (b) come from an area which is not subject to any restrictions associated with an occurrence of American foulbrood, and where no such occurrence has taken place within at least 30 days prior to the issuance of the present certificate. Where an outbreak of American foulbrood has occurred previously, all hives within a radius of three kilometres have been checked by the competent authority and all infected hives burned or treated and inspected to the satisfaction of the said competent authority within 30 days following the last recorded case;
- (c) are from hives or come from hives or colonies (in the case of bumble bees) from which samples of the comb have been tested in the last 30 days for American foulbrood as laid down in the OIE Manual of Diagnostic Tests and Vaccines for terrestrial Animals with negative results;
- (d) come from an area of at least 100 km radius which is not subject to any restrictions associated with the occurrence of the small hive beetle (*Aethina tumida*) or *Tropilaelaps* spp., and where these infestations are absent;
- (e) are from hives or come from hives or colonies (in the case of bumble bees), which were inspected immediately prior to dispatch and show no clinical signs or suspicion of disease including infestations affecting bees;
- (f) Have undergone detailed examinations to ensure that all bees and packaging do not contain the small hive beetle (*Aethina tumida*) or their eggs and larvae, or other infestations, in particular *Tropilaelaps* spp., affecting bees.

II.1.3. the packaging material, queen cages, accompanying products and food are new and have not been in contact with diseased bees or brood-combs, and all precautions have been taken to prevent contamination with agents causing diseases or infestations of bees.

Notes

Part I:

- Box reference I.12: the introduction of queen bees and their accompanying attendants (*Apis mellifera*) is not authorised into the territories of Member States listed in the third column of the table set out in the Annex to Commission Implementing Decision 2013/503/EU (OJ L 273, 15.10.2013, p. 38).
- Box reference I.20: Number of queen bees (*Apis mellifera* and *Bombus* spp.). Each queen bee may be accompanied by a maximum of 20 attendants.

Part II:

⁽¹⁾ Code of the territory as it appears in Part 1 of Annex II or Section 1 of Part 1 of Annex IV to Commission Regulation (EU) No 206/2010.

Official veterinarian/Official inspector

Name (in capital letters):	Qualification and title:
Date:	Signature:
Stamp:	

COMMISSION IMPLEMENTING REGULATION (EU) No 1045/2013**of 25 October 2013****establishing the standard import values for determining the entry price of certain fruit and vegetables**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Regulation (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation) ⁽¹⁾,

Having regard to Commission Implementing Regulation (EU) No 543/2011 of 7 June 2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors ⁽²⁾, and in particular Article 136(1) thereof,

Whereas:

- (1) Implementing Regulation (EU) No 543/2011 lays down, pursuant to the outcome of the Uruguay Round multi-lateral trade negotiations, the criteria whereby the

Commission fixes the standard values for imports from third countries, in respect of the products and periods stipulated in Annex XVI, Part A thereto.

- (2) The standard import value is calculated each working day, in accordance with Article 136(1) of Implementing Regulation (EU) No 543/2011, taking into account variable daily data. Therefore this Regulation should enter into force on the day of its publication in the *Official Journal of the European Union*,

HAS ADOPTED THIS REGULATION:

Article 1

The standard import values referred to in Article 136 of Implementing Regulation (EU) No 543/2011 are fixed in the Annex to this Regulation.

Article 2

This Regulation shall enter into force on the day of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 25 October 2013.

*For the Commission,
On behalf of the President,*

Jerzy PLEWA
*Director-General for Agriculture and
Rural Development*

⁽¹⁾ OJ L 299, 16.11.2007, p. 1.

⁽²⁾ OJ L 157, 15.6.2011, p. 1.

ANNEX

Standard import values for determining the entry price of certain fruit and vegetables

<i>(EUR/100 kg)</i>		
CN code	Third country code ⁽¹⁾	Standard import value
0702 00 00	AL	53,3
	MA	44,6
	MK	36,9
	ZZ	44,9
0707 00 05	MK	46,1
	TR	138,8
	ZZ	92,5
0709 93 10	TR	150,6
	ZZ	150,6
0805 50 10	AR	12,9
	CL	77,5
	IL	100,2
	TR	80,4
	ZA	57,5
	ZZ	65,7
0806 10 10	BR	216,3
	TR	172,3
	ZZ	194,3
0808 10 80	CL	186,8
	IL	85,8
	NZ	194,2
	US	154,3
	ZA	128,6
	ZZ	149,9
0808 30 90	CN	79,7
	TR	118,4
	US	165,9
	ZZ	121,3

⁽¹⁾ Nomenclature of countries laid down by Commission Regulation (EC) No 1833/2006 (OJ L 354, 14.12.2006, p. 19). Code 'ZZ' stands for 'of other origin'.

COMMISSION IMPLEMENTING REGULATION (EU) No 1046/2013**of 25 October 2013****on the issue of licences for importing rice under the tariff quotas opened for the October 2013 subperiod by Implementing Regulation (EU) No 1273/2011**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Regulation (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation) ⁽¹⁾,Having regard to Commission Regulation (EC) No 1301/2006 of 31 August 2006 laying down common rules for the administration of import tariff quotas for agricultural products managed by a system of import licences ⁽²⁾, and in particular Article 7(2) thereof,

Whereas:

(1) Commission Implementing Regulation (EU) No 1273/2011 of 7 December 2011 opening and providing for the administration of certain tariff quotas for imports of rice and broken rice ⁽³⁾ opened and provided for the administration of certain import tariff quotas for rice and broken rice, broken down by country of origin and split into several subperiods in accordance with Annex I to that Implementing Regulation.

(2) October is the only subperiod for the quota with order number 09.4138 provided for under Article 1(1)(a) of Implementing Regulation (EU) No 1273/2011. This quota comprises the balance of the unused quantities from the quotas with order numbers 09.4127 — 09.4128 — 09.4129 — 09.4130 in the previous subperiod. October is the last subperiod for the quotas provided for under Article 1(1)(b) and (e) of Implementing Regulation (EU) No 1273/2011, which comprise the balance of the unused quantities from the previous subperiod.

(3) The notifications sent in accordance with point (a) of Article 8 of Implementing Regulation (EU) No 1273/2011 show that, for the quota with order

number 09.4138, the applications lodged in the first 10 working days of October 2013 under Article 4(1) of that Implementing Regulation cover a quantity greater than that available. The extent to which import licences may be issued should therefore be determined by fixing the allocation coefficient to be applied to the quantity requested under the quota concerned.

(4) The notifications also show that, for the quota with order number 09.4148, the applications lodged in the first 10 working days of October 2013 under Article 4(1) of Implementing Regulation (EU) No 1273/2011 cover a quantity less than that available.

(5) The final percentage take-up for 2013 of each quota provided for by Implementing Regulation (EU) No 1273/2011 should also be made known.

(6) In order to ensure sound management of the procedure of issuing import licences, this Regulation should enter into force immediately after its publication,

HAS ADOPTED THIS REGULATION:

Article 1

1. For import licence applications for rice under the quota with order number 09.4138 referred to in Implementing Regulation (EU) No 1273/2011 lodged in the first 10 working days of October 2013, licences shall be issued for the quantity requested, multiplied by the allocation coefficient set out in the Annex to this Regulation.

2. The final percentage take-up for 2013 of each quota provided for by Implementing Regulation (EU) No 1273/2011 is given in the Annex to this Regulation.

Article 2

This Regulation shall enter into force on the day of its publication in the *Official Journal of the European Union*.

⁽¹⁾ OJ L 299, 16.11.2007, p. 1.

⁽²⁾ OJ L 238, 1.9.2006, p. 13.

⁽³⁾ OJ L 325, 8.12.2011, p. 6.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 25 October 2013.

*For the Commission,
On behalf of the President,
Jerzy PLEWA
Director-General for Agriculture and
Rural Development*

ANNEX

Quantities to be allocated for the October 2013 subperiod under Implementing Regulation (EU) No 1273/2011 and final percentage take-up for 2013

- (a) Quota of wholly milled or semi-milled rice covered by CN code 1006 30 as provided for in Article 1(1)(a) of Implementing Regulation (EU) No 1273/2011:

Origin	Order number	Allocation coefficient for October 2013 subperiod	Final percentage take-up of the quota for 2013
United States	09.4127		87,29 %
Thailand	09.4128		98,82 %
Australia	09.4129		86,75 %
Other origins	09.4130		100 %
All countries	09.4138	1,016713 %	100 %

- (b) Quota of husked rice covered by CN code 1006 20 as provided for in Article 1(1)(b) of Implementing Regulation (EU) No 1273/2011:

Origin	Order number	Allocation coefficient for October 2013 subperiod	Final percentage take-up of the quota for 2013
All countries	09.4148	— ⁽¹⁾	10,10 %

⁽¹⁾ No allocation coefficient applied for this subperiod; no licence applications were notified to the Commission.

- (c) Quota of broken rice covered by CN code 1006 40 00 as provided for in Article 1(1)(c) of Implementing Regulation (EU) No 1273/2011:

Origin	Order number	Final percentage take-up of the quota for 2013
Thailand	09.4149	1,03 %
Australia	09.4150	3,24 %
Guyana	09.4152	0 %
United States	09.4153	50 %
Other origins	09.4154	100 %

- (d) Quota of wholly milled or semi-milled rice covered by CN code 1006 30 as provided for in Article 1(1)(d) of Implementing Regulation (EU) No 1273/2011:

Origin	Order number	Final percentage take-up of the quota for 2013
Thailand	09.4112	100 %
United States	09.4116	100 %
India	09.4117	100 %
Pakistan	09.4118	100 %
Other origins	09.4119	100 %
All countries	09.4166	100 %

- (e) Quota of broken rice covered by CN code 1006 40 00 as provided for in Article 1(1)(e) of Implementing Regulation (EU) No 1273/2011:

Origin	Order number	Allocation coefficient for October 2013 subperiod	Final percentage take-up of the quota for 2013
All countries	09.4168	— ⁽¹⁾	100 %

⁽¹⁾ No quantity available for this subperiod.

DECISIONS

DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 9 October 2013

on the mobilisation of the European Globalisation Adjustment Fund, in accordance with point 28 of the Interinstitutional Agreement of 17 May 2006 between the European Parliament, the Council and the Commission on budgetary discipline and sound financial management (application EGF/2011/025 IT/Lombardia from Italy)

(2013/526/EU)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to the Interinstitutional Agreement of 17 May 2006 between the European Parliament, the Council and the Commission on budgetary discipline and sound financial management ⁽¹⁾, and in particular point 28 thereof,

Having regard to Regulation (EC) No 1927/2006 of the European Parliament and of the Council of 20 December 2006 establishing the European Globalisation Adjustment Fund ⁽²⁾, and in particular Article 12(3) thereof,

Having regard to the proposal from the European Commission,

Whereas:

- (1) The European Globalisation Adjustment Fund (EGF) was established to provide additional support for workers made redundant as a result of major structural changes in world trade patterns due to globalisation and to assist them with their reintegration into the labour market.
- (2) The scope of the EGF was broadened for applications submitted from 1 May 2009 to 30 December 2011 to include support for workers made redundant as a direct result of the global financial and economic crisis.
- (3) The Interinstitutional Agreement of 17 May 2006 allows the mobilisation of the EGF within the annual ceiling of EUR 500 million.

- (4) Italy submitted an application on 30 December 2011 to mobilise the EGF in respect of redundancies in two enterprises operating in the NACE Revision 2 Division 26 ('Manufacture of computer, electronic and optical products') in the NUTS II region of Lombardia (ITC4) and supplemented it by additional information up to 12 March 2013. This application complies with the requirements for determining the financial contributions as laid down in Article 10 of Regulation (EC) No 1927/2006. The Commission, therefore, proposes to mobilise an amount of EUR 1 164 930.
- (5) The EGF should, therefore, be mobilised in order to provide a financial contribution for the application submitted by Italy,

HAVE ADOPTED THIS DECISION:

Article 1

For the general budget of the European Union for the financial year 2013, the European Globalisation Adjustment Fund shall be mobilised to provide the sum of EUR 1 164 930 in commitment and payment appropriations.

Article 2

This Decision shall be published in the *Official Journal of the European Union*.

Done at Strasbourg, 9 October 2013.

For the European Parliament

The President

M. SCHULZ

For the Council

The President

V. LEŠKEVIČIUS

⁽¹⁾ OJ C 139, 14.6.2006, p. 1.

⁽²⁾ OJ L 406, 30.12.2006, p. 1.

COUNCIL DECISION 2013/527/CFSP**of 24 October 2013****amending and extending the mandate of the European Union Special Representative for the Horn of Africa**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on European Union, and in particular Article 28, Article 31(2) and Article 33 thereof,

Having regard to the proposal from the High Representative of the Union for Foreign Affairs and Security Policy,

Whereas:

- (1) On 8 December 2011, the Council adopted Decision 2011/819/CFSP ⁽¹⁾ appointing Mr Alexander RONDOS as the European Union Special Representative (EUSR) for the Horn of Africa. The EUSR's mandate expires on 31 October 2013.
- (2) On 11 August 2010, the Council adopted Decision 2010/450/CFSP ⁽²⁾ appointing Mrs Rosalind MARSDEN as the European Union Special Representative (EUSR) for Sudan. The EUSR's mandate expires on 31 October 2013.
- (3) The mandate of the EUSR for the Horn of Africa, Mr Alexander RONDOS, should be expanded to include elements on Sudan and South Sudan and should be extended for a further period of 12 months.
- (4) The EUSR will implement the mandate in the context of a situation which may deteriorate and could impede the achievement of the objectives of the Union's external action as set out in Article 21 of the Treaty,

HAS ADOPTED THIS DECISION:

*Article 1***European Union Special Representative**

1. The mandate of Mr Alexander RONDOS as the EUSR for the Horn of Africa is hereby extended until 31 October 2014. The mandate of the EUSR may be terminated earlier, if the Council so decides, on a proposal from the High Representative of the Union for Foreign Affairs and Security Policy (HR).

⁽¹⁾ Council Decision 2011/819/CFSP of 8 December 2011 appointing the European Union Special Representative for the Horn of Africa (OJ L 327, 9.12.2011, p. 62).

⁽²⁾ Council Decision 2010/450/CFSP of 11 August 2010 appointing the European Union Special Representative for Sudan (OJ L 211, 12.8.2010, p. 42).

2. For the purposes of the mandate of the EUSR, the Horn of Africa is defined as comprising the Republic of Djibouti, the State of Eritrea, the Federal Democratic Republic of Ethiopia, the Republic of Kenya, the Federal Republic of Somalia, the Republic of the Sudan, the Republic of South Sudan and the Republic of Uganda. For issues with broader regional implications, the EUSR shall engage with countries and regional entities beyond the Horn of Africa, as appropriate.

*Article 2***Policy objectives**

1. The mandate of the EUSR shall be based on the Union's policy objectives in relation to the Horn of Africa as set out in its strategic framework adopted on 14 November 2011 and in relevant Council Conclusions, to contribute actively to regional and international efforts to achieve peaceful co-existence and lasting peace, security and development within and among the countries in the region. The EUSR shall furthermore aim to enhance the quality, intensity, impact and visibility of the Union's multi-faceted engagement in the Horn of Africa.

2. The Union's policy objectives include, inter alia:

- (a) the continued stabilisation of Somalia, in particular from a regional dimension perspective;
- (b) the peaceful coexistence of Sudan and South Sudan as two viable and prosperous states with robust and accountable political structures;
- (c) the resolution of current conflicts and the avoidance of potential conflicts between or within countries in the region;
- (d) the support of political, security and economic regional cooperation.

*Article 3***Mandate**

1. In order to achieve the Union's policy objectives in relation to the Horn of Africa, the mandate of the EUSR shall be to:

- (a) engage with all relevant stakeholders of the region, governments, regional authorities, international and regional organisations, civil society and diasporas, with a view to furthering the Union's policy objectives and contribute to a better understanding of the role of the Union in the region;
- (b) represent the Union in relevant international fora, as appropriate, and ensure visibility for Union support to crisis management, as well as conflict resolution and prevention;
- (c) encourage and support effective political and security cooperation and economic integration in the region through the Union's partnership with the African Union (AU) and sub-regional organisations, in particular the Intergovernmental Authority on Development (IGAD);
- (d) follow political developments in the region and contribute to the development of the Union's policy towards the region, including in relation to Somalia, Sudan, South Sudan, the Ethiopia-Eritrea border issue and implementation of the Algiers Agreement, the Nile Basin initiative and other concerns in the region that have an impact on its security, stability and prosperity
- (e) with regard to Somalia, and working in close coordination with the EU Special Envoy for Somalia and relevant regional and international partners, including the United Nations Secretary-General Special Representative for Somalia and the African Union, contribute actively to actions and initiatives leading to further stabilization and post transition arrangements for Somalia, with an emphasis on promoting a coordinated and coherent international approach towards Somalia, building good neighbourly relations and supporting the development of the security sector in Somalia, including, through the European Union military mission to contribute to the training of Somali security forces (EUTM Somalia), EUNAVFOR Atalanta, EUCAP Nestor and the Union's continued support to the African Union Mission in Somalia (AMISOM), working closely with Member States;
- (f) with regard to Sudan and South Sudan, and working in close cooperation with the respective Heads of Union delegations, contribute to the coherence and effectiveness of Union policy towards Sudan and South Sudan and support their peaceful coexistence, in particular through implementation of the Addis Agreements and resolution of the outstanding issues in relation to the Comprehensive Peace Agreement, including Abyei, political solutions to the ongoing conflicts, particularly in Darfur, Southern Kordofan and Blue Nile, institution-building in South Sudan and national reconciliation. In this regard, the EUSR will contribute to a coherent international approach in close cooperation with the AU and in particular the AU High Level Implementation Panel for Sudan (AUHIP), the United Nations (UN) and other leading regional and international stakeholders.
- (g) follow closely the trans-boundary challenges affecting the Horn of Africa, including terrorism, radicalisation, maritime security and piracy, organised crime, arms smuggling, refugee and migration flows and any political and security consequences of humanitarian crises;
- (h) promote humanitarian access throughout the region;
- (i) contribute to the implementation of the Council Decision 2011/168/CFSP⁽¹⁾ and the Union's human rights policy in cooperation with the EUSR for Human Rights, including the EU Guidelines on human rights, in particular the EU Guidelines on Children and Armed Conflict as well as on violence against women and girls and combating all forms of discrimination against them, and the Union's policy regarding UN Security Council Resolution (UNSCR) 1325 (2000) on Women, Peace and Security, including by monitoring and reporting on developments as well as formulating recommendations in this regard.
2. For the purpose of the fulfilment of the mandate, the EUSR shall, inter alia:
- (a) advise and report on the definition of Union positions in international fora, as appropriate, in order to promote proactively the Union's comprehensive policy approach towards the Horn of Africa;
- (b) maintain an overview of all activities of the Union.

Article 4

Implementation of the mandate

1. The EUSR shall be responsible for the implementation of the mandate, acting under the authority of the HR.

⁽¹⁾ Council Decision 2011/168/CFSP of 21 March 2011 on the International Criminal Court and repealing Common Position 2003/444/CFSP (OJ L 76, 22.3.2011, p. 56.).

2. The Political and Security Committee (PSC) shall maintain a privileged link with the EUSR and shall be the EUSR's primary point of contact with the Council. The PSC shall provide the EUSR with strategic guidance and political direction within the framework of the mandate, without prejudice to the powers of the HR.

3. The EUSR shall work in close coordination with the European External Action Service (EEAS) and its relevant departments, the Union delegations in the region and the Commission.

Article 5

Financing

1. The financial reference amount intended to cover the expenditure related to the mandate of the EUSR for the period from 1 November 2013 to 31 October 2014 shall be EUR 2 720 000.

2. The expenditure shall be managed in accordance with the procedures and rules applicable to the general budget of the Union.

3. The management of the expenditure shall be subject to a contract between the EUSR and the Commission. The EUSR shall be accountable to the Commission for all expenditure.

Article 6

Constitution and composition of the team

1. Within the limits of the EUSR's mandate and the corresponding financial means made available, the EUSR shall be responsible for constituting a team. The team shall include the expertise on specific policy and security issues as required by the mandate. The EUSR shall promptly and regularly inform the Council and the Commission of the composition of the team.

2. Member States, the institutions of the Union and the EEAS may propose the secondment of staff to work with the EUSR. The salary of such seconded personnel shall be covered by the Member State, the institution of the Union concerned or the EEAS, respectively. Experts seconded by Member States to the institutions of the Union or the EEAS may also be posted to the EUSR. International contracted staff shall have the nationality of a Member State.

3. All seconded personnel shall remain under the administrative authority of the sending Member State, the sending institution of the Union or the EEAS, and shall carry out their duties and act in the interest of the mandate of the EUSR.

4. The EUSR staff shall be co-located with the relevant EEAS departments or Union delegations in order to contribute to the coherence and consistency of their respective activities.

Article 7

Privileges and immunities of the EUSR and the staff of the EUSR

The privileges, immunities and further guarantees necessary for the completion and smooth functioning of the missions of the EUSR and the members of the EUSR's staff shall be agreed with the host countries, as appropriate. Member States and the EEAS shall grant all necessary support to such effect.

Article 8

Security of EU classified information

The EUSR and the members of the EUSR's team shall respect the security principles and minimum standards established by Council Decision 2011/292/EU ⁽¹⁾.

Article 9

Access to information and logistical support

1. Member States, the Commission, the EEAS and the General Secretariat of the Council shall ensure that the EUSR is given access to any relevant information.

2. The Union delegations in the region and/or the Member States, as appropriate, shall provide logistical support in the region.

Article 10

Security

In accordance with the Union's policy on the security of personnel deployed outside the Union in an operational capacity under Title V of the Treaty, the EUSR shall take all reasonably practicable measures, in conformity with the EUSR's mandate and the security situation in the geographical area of responsibility, for the security of all personnel under the direct authority of the EUSR, in particular by:

- (a) establishing a mission-specific security plan based on guidance from the EEAS, including mission-specific physical, organisational and procedural security measures, governing the management of the secure movement of personnel to, and within, the mission area as well as the management of security incidents and including a mission contingency plan and evacuation plan;

⁽¹⁾ Council Decision 2011/292/EU of 31 March 2011 on the security rules for protecting EU classified information (OJ L 141, 27.5.2011, p. 17.).

- (b) ensuring that all personnel deployed outside the Union are covered by high risk insurance, as required by the conditions in the mission area;
- (c) ensuring that all members of the EUSR's team to be deployed outside the Union, including locally contracted personnel, have received appropriate security training before or upon arriving in the mission area, based on the risk ratings assigned to the mission area by the EEAS;
- (d) ensuring that all agreed recommendations made following regular security assessments are implemented, and providing the Council, the HR and the Commission with written reports on their implementation and on other security issues within the framework of the progress report and the report on the implementation of the mandate.

Article 11

Reporting

1. The EUSR shall regularly provide the HR and the PSC with oral and written reports. The EUSR shall also report to Council working parties as necessary. Regular written reports shall be circulated through the COREU network. Upon recommendation of the HR or the PSC, the EUSR may provide the Foreign Affairs Council with reports. In accordance with Article 36 of the Treaty the EUSR may be involved in briefing the European Parliament.
2. The EUSR shall report on the best way of pursuing Union initiatives, such as the contribution of the Union to reforms, and including the political aspects of relevant Union development projects, in coordination with the Union delegations in the region.

Article 12

Coordination

1. The EUSR shall contribute to the unity, consistency and effectiveness of the Union's actions and shall help to ensure that all Union instruments and Member States' action are engaged consistently, to attain the Union's policy objectives. The activities of the EUSR shall be coordinated with those of Union Delegations and of the Commission, as well as those of other EUSR's active in the region, in particular with the

EUSR to the AU and with the EU Special Envoy for Somalia. The EUSR shall provide regular briefings to Member States' missions and the Union delegations in the region.

2. In the field, close liaison and communication shall be maintained with the Heads of the Union delegation and Member States' Heads of Mission. They shall make best efforts to assist the EUSR in the implementation of the mandate. The EUSR, in close co-ordination with the relevant Union delegations, shall provide local political guidance to the Force Commander of EUNAVFOR Atalanta, the Mission Commander of EUTM Somalia, the Head of EUCAP Nestor and the Head of EUAVSEC in South Sudan. The EUSR, the EU Operation Commanders and the Civilian Operation Commander shall consult each other as required.

3. The EUSR shall closely cooperate with the authorities of the countries involved, the UN, the AU, IGAD, other national regional and international stakeholders, and also with civil society in the region.

Article 13

Review

The implementation of this Decision and its consistency with other contributions from the Union to the region shall be kept under regular review. The EUSR shall present to the Council, the HR and the Commission a progress report by the end of April 2014 and a comprehensive mandate implementation report at the end of the mandate.

Article 14

Entry into force

This Decision shall enter into force on the day of its adoption.

Done at Brussels, 24 October 2013.

For the Council

The President

L. LINKEVIČIUS

COMMISSION DECISION

of 20 March 2013

on State aid measure SA. 33113 (2012/C) (ex 2011/NN, 2011/CP) awarded by Poland for Nauta S.A.

(notified under document C(2013) 1522)

(Only the Polish text is authentic)

(Text with EEA relevance)

(2013/528/EU)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular the first subparagraph of Article 108(2) thereof,

Having regard to the Agreement on the European Economic Area, and in particular Article 62(1)(a) thereof,

Having called on interested parties to submit their comments pursuant to those provisions⁽¹⁾,

Whereas:

I. THE PROCEDURE

- (1) On 6 November 2008 the Commission adopted two recovery decisions⁽²⁾ concerning unlawful state aid to the shipyards in Gdynia and Szczecin ('Gdynia Shipyard' and 'Szczecin Shipyard') allowing a special sales procedure. The Polish authorities were given an opportunity to sell the yards' assets in packages in open, transparent, unconditional and non-discriminatory tenders.
- (2) The Commission, when following up the recovery process, requested clarifications on the tender procedures. A request for information was sent by the Commission on 10 June 2010 to which the Polish authorities replied on 9 July 2010 with subsequent information being sent on 30 July 2010, 3 September 2010, 4 October 2010 and 16 December 2011.
- (3) The Commission met the Polish authorities on 15 July 2010, 10 September 2010, 22 October 2010 and

6 December 2011. An exchange of letters between Vice-President Almunia and the Minister for the Treasury, Mr Grad, on the liquidation procedure took place on 28 June 2011, 18 July 2011, 7 October 2011 and 25 October 2011.

- (4) By letter dated 25 January 2012, the Commission informed Poland that it had decided to initiate the procedure laid down in Article 108(2) of the Treaty on the Functioning of the European Union ('the Treaty' or 'TFEU') in relation to the acquisition of some of the assets of Gdynia Shipyard by Nauta S.A. Repair Shipyard ('Nauta' or 'the company').

- (5) The opening decision was published in the *Official Journal of the European Union*⁽³⁾. The Commission did not receive any comments from third parties on the measures.

- (6) Poland submitted its comments on 27 February 2012. Further information was provided by Poland on 26 October, 8 November and 5 December 2012.

II. DESCRIPTION

1. THE BENEFICIARY

- (7) Nauta, which was created in 1926, is one of the oldest Polish shipyards. Between 1945 and 2010, Nauta was fully and directly owned by the Treasury. On 28 October 2009 a notarial deed was signed by which the State-owned Industrial Development Agency ('the IDA') purchased 93,15 % of shares in Nauta for PLN [80-140] (*) million⁽⁴⁾ (ca. EUR [20-35] million⁽⁵⁾). The transaction was completed on 12 January 2010, when

⁽¹⁾ OJ C 213, 19.7.2012, p. 30.

⁽²⁾ Commission Decision of 6 November 2008 on State aid C 19/05 (ex N 203/05) granted by Poland to Stocznia Szczecińska (OJ L 5, 8.1.2010, p. 1), and Commission Decision of 6 November 2008 on State aid C 17/05 (ex N 194/05 and PL 34/04) granted by Poland to Stocznia Gdynia (OJ L 33, 4.2.2010, p. 1).

⁽³⁾ See footnote 1.

^(*) Business secret.

⁽⁴⁾ Nauta's value was estimated at PLN [90-150] million in an expert evaluation dated April 2009 and at PLN [90-150] million in an update on 21 April 2010.

⁽⁵⁾ EUR 1 = PLN 4 approx.

the Treasury handed over the shares in Nauta to the IDA, after which the IDA became the majority shareholder of Nauta ⁽⁶⁾.

- (8) The main activity of the company is the repair and rebuilding of small and medium-sized ships. It also builds small specialist vessels and manufactures steel structures.
- (9) Nauta is the parent company of a group comprising 13 subsidiaries and associates. The activities of the

subsidiaries and associates relate mainly to the shipyard business. Nauta operates within the group as administrative centre in the following areas: marketing, acquisition of orders, maintenance of energy systems and other resources, project management.

- (10) Selected financial data for Nauta before and after the bond issue (see recital 19; 'pre-transaction' and 'post-transaction') are presented in Table 1 below.

Table 1

Selected financial data for Nauta in 2006-2011

(PLN thousand)

	Pre-transaction results				Post-transaction results	
	2006	2007	2008	2009	2010	2011
Sales revenue	127 121	87 954	136 988	93 576	94 666	163 817
Costs	114 538	81 546	132 528	84 305	76 495	138 900
Profit from sales	12 583	6 408	4 460	9 271	18 171	24 916
Return on sales	9,9 %	7,3 %	3,3 %	9,9 %	19,2 %	15,2 %
Other operating income	5 448	533	545	1 361	4 005	78 038
Other operating costs	561	26	1 026	126	21 989	1 978
Financial income	3 628	5 085	9 334	2 317	7 990	542
Financial costs	1 441	639	13 236	12 554	17 474	12 479
Gross profit/loss	19 123	11 363	83	285	- 38 514	53 468
Net profit/loss	14 294	8 318	248	531	- 33 308	44 091

- (11) The company's financial situation deteriorated in 2009 and 2010 as a result of the global financial crisis and exchange rate fluctuations. Additionally, in 2010 the company set aside a provision for the modernisation of the assets acquired in 2009 (see recital 17 below) which contributed to an increase in other operating costs.

2. BENEFICIARY'S BUSINESS STRATEGY FOR 2009-2012

2.1. SUMMARY OF THE BENEFICIARY'S BUSINESS STRATEGY

- (12) According to the Polish authorities, Nauta's business

strategy for 2009-2012 can be broken down into the following steps:

- Nauta issues bonds to a value of PLN 120 million (EUR 30 million approx.), subscribed by the IDA;
- Nauta purchases assets of Gdynia Shipyard;
- Nauta's place of business is transferred to the area where the purchased assets are located;
- the land on which Nauta currently operates is sold;
- the bonds are redeemed from the IDA in November 2011 at the latest.

⁽⁶⁾ The remaining 6,85 % of share capital belonged to the Treasury. On 30 September 2010 the IDA transferred its stake in Nauta to its wholly owned subsidiary MS Investment Fund ('MS TFI'). On 25 October 2010 MS TFI transferred the shares to its sub-fund MARS Investment Fund. As a result of those transactions the IDA remains the majority shareholder in Nauta. The current minority shareholders are Nauta's employees (3,19 %) and the Treasury (3,66 %).

2.2. VALUATIONS OF THE LAND ON WHICH NAUTA CURRENTLY OPERATES

- (13) The company owns the land on which it currently operates. The land is located in the centre of Gdynia and covers 84 497 square metres. According to the Polish authorities, the business rationale for acquiring Gdynia Shipyard's assets was based on the assumption that the area where Nauta is currently located would be redefined as a business and services ('non-industrial' or 'commercial') area instead of an industrial one pursuant to Gdynia City Council Resolution No XVII/400/08 dated 27 February 2008 approving the urban development study for Gdynia ('the study').
- (14) According to the Polish authorities, in the light of the study and in view of the ongoing process of changing the urban development plan for Gdynia, the estimated market value of the land in 2011 amounted to PLN [> 2 000] (EUR [> 500]) per square metre, i.e. PLN [> 168] million (EUR [> 42] million).
- (15) The only pre-transaction valuation of this land was performed on 21 October 2009 by [...], a certified surveyor. It estimated the value at PLN [> 168] million (EUR [> 42] million), which corresponds to a value of PLN [> 1 900] (EUR [> 475]) per square metre. The valuation assumed that the urban development plan for Gdynia would be changed so that the land could be sold as commercial land.
- (16) Other valuations were performed *ex post* in 2010 and 2011. A summary of all the valuations conducted by independent surveyors (*ex ante* and *ex post*) is set out in Table 2 below.

Table 2

Value of Nauta's land estimated by independent surveyors

Appraisal date	Assumption regarding land use	Estimated total value, PLN	Estimated value per square metre, PLN
Pre-transaction			
21.10.2009	Non-industrial	[> 168 000 000]	[> 1 900]
Post-transaction			
8.12.2010	Non-industrial	[> 130 000 000]	[> 1 500]
4.10.2011	Industrial	[> 70 000 000]	[> 800]
17.10.2011	Non-industrial	[> 140 000 000]	[> 1 700]

2.3. PURCHASE OF THE ASSETS OF GDYNIA SHIPYARD

- (17) In order to implement the Commission's recovery decision of November 2008 concerning unlawful state aid to Gdynia Shipyard, which allowed for a special sale procedure, the Polish authorities organised open tenders to sell the assets of that shipyard. In November 2009 Nauta acquired some of these assets ('acquired assets') by way of an open tender for PLN 57,7 million (EUR 14 million), including:
- (a) an outfitting area (2 quays with infrastructure, prefabrication hall, cranes, social facilities for workers including a canteen) for which it paid PLN 34,6 million;
- (b) an outside area (with cranes to produce three-dimensional sections) for PLN 5 million;
- (c) a section of a building and outfitting facilities with cranes, including two production halls for PLN 18,1 million.
- (18) The purchase was financed through a 2-year bond issue subscribed by the IDA at an actual interest rate of 5,28 %. The bonds were not redeemed by Nauta as originally scheduled on 30 November 2011. The IDA agreed to postpone the redemption date until 30 November 2013 at an increased interest rate of 8,46 % p.a.

3. DESCRIPTION OF THE MEASURES

The first measure

- (19) The purchase of assets was financed through a 2-year bond issue acquired by the IDA for PLN 120 million (EUR 30 million) ⁽⁷⁾, at an actual annual interest rate of 5,28 % (5,15 % in the 1st year and 5,42 % in the 2nd year) with a maturity date of 30 November 2011 ('the first measure' or 'the transaction'). The issue was secured by a mortgage on the land on which the company operated (see Section 2.2 above). Nauta planned to redeem the bonds using the proceeds from the sale of the land.

⁽⁷⁾ The proceeds from the bond issue were intended to cover not just the purchase of the assets but also their adaptation and modernisation deemed necessary before Nauta could move its operations to a new location. The value of the bonds was higher than the value of the assets acquired to provide for this additional expenditure.

The second measure

- (20) Since the new location to which Nauta's place of business was to be transferred following adaptation and modernisation of the acquired assets was not ready by the date initially envisaged, Nauta did not sell the land, and did not redeem the bonds purchased by the IDA. A new contract between the IDA and Nauta was signed in November 2011 to extend the maturity of the bonds until 30 November 2013. The interest rate was increased to 1 month WIBOR ⁽⁸⁾ plus a margin of 3,7 percentage points (8,46 % as of 14 December 2011) and additional collateral was given, including a mortgage on the acquired assets, in order to cover an increased default risk.

4. DECISION TO OPEN THE FORMAL INVESTIGATION PROCEDURE

The first measure

- (21) In the opening decision the Commission expressed doubts as to whether Nauta would have been able to obtain such financing on similar terms on the market. Particular reference was made to:

- (a) optimistic assumptions regarding an increase in revenues;
- (b) optimistic assumptions regarding the future sale of land;
- (c) the rate at which the bonds were issued.

- (22) Based on the information available at the time, the Commission viewed the revenue growth forecasts as over-optimistic, given competition on the ship repair market (the company's core business), potential overcapacity and the economic crisis.

- (23) The Commission had doubts as to whether the risk associated with the sale of the land on which Nauta operated had been properly assessed by the IDA. The urban development plan which classified the land as 'industrial' or 'commercial' had not been adopted and the duration of the adoption process had not been duly taken into account. Therefore the Commission questioned whether the assumed 'commercial' value of the land (PLN [> 168] million) was justified. As the process of adopting the urban development plan was not complete, a private investor would probably be more conservative in assessing the value of the land.

- (24) The Commission was also concerned that the IDA had accepted rather optimistic assumptions concerning the value of Nauta's assets used as collateral for the bonds. Although the only pre-transaction valuation amounted to [PLN > 168 million], post-transaction valuations (in 2010 and 2011) had estimated the value to be within the range of PLN [70-90] million to PLN [140-160] million, depending on land use.

- (25) The actual annual interest rate of 5,28 % offered for the bonds appeared to be low. The Polish authorities did not provide a credit rating for Nauta and did not specify the level of collateral within the meaning of the Communication from the Commission on the revision of the method for setting the reference and discount rates ⁽⁹⁾ ('the reference rate Communication'). According to that Communication, the margin applied to the bonds corresponded to a 'high' collateralisation and at least a 'good' (BBB) rating of the company. The Commission questioned whether this was a faithful reflection of the situation.

The second measure

- (26) While the opening decision noted the higher interest rate applied and the additional collateral provided under the new contract, the Commission did not have sufficient information on the business rationale for extending the maturity of the bonds by 2 years. Therefore the Commission doubted whether this extension would have been accepted by a private investor.

III. COMMENTS FROM POLAND

- (27) In their comments the Polish authorities provided clarifications and additional contemporaneous evidence for both measures.

1. THE FIRST MEASURE

- (28) As regards the doubts concerning the acquisition of the bonds by the IDA at an actual annual interest rate of 5,28 %, the Polish authorities provided additional information, including forecasts for Nauta's financial results, the prospects for the ship repair market and the value of Nauta's assets to be sold. The Polish authorities also submitted an *ex post* private investor test conducted by [...].

⁽⁸⁾ Warsaw Interbank Offered Rate.

⁽⁹⁾ OJ C 14 of 19.1.2008, p. 6.

Optimistic assumptions regarding an increase in revenues

- (29) The Polish authorities argued that the purchase of Gdynia Shipyard's assets was based upon the real business needs of Nauta and had been preceded by a proper business plan, prepared by Nauta's management board with the participation of an independent consultant. Poland claimed that the business plan submitted to the Commission clearly demonstrated the profitability of the investment.
- (30) With regard to the optimistic forecasts of growth in Nauta's sales revenue, the Polish authorities pointed out that despite the decreasing profitability of Nauta, it was still making a profit, had positive return on equity (ROE), return on sales (ROS) and return on assets (ROA) and significant cash reserves, and did not use interest-bearing debt. The growth forecast was confirmed *ex post* as Nauta's revenues in 2011 were higher than forecast. Also, as forecast, the company recorded a profit in 2011 and 2012.
- (31) Poland also provided more information on the ship repair market, for which the outlook was positive in its view. Poland referred to growing demand for ship repairs associated with an increase in the total number of commercial ships. An OECD forecast for ship repairs in 2007-2015 was invoked as evidence that the market was expected to grow by 110 %.
- (32) Poland also described Nauta's market position and good commercial relationship with partners in Scandinavia. According to Poland, Nauta's services are of high quality and can successfully compete with the cheaper but lower quality services provided by shipyards in Russia.

Optimistic assumptions regarding the future land sale

- (33) Replying to the Commission's concerns regarding the assumed value of the Nauta assets used as collateral for the transaction, the Polish authorities stressed that (i) the IDA relied on one pre-transaction valuation prepared by a certified independent surveyor, (ii) the post-transaction valuations of 2011 were based on different land use assumptions (industrial or commercial) and therefore gave different values, (iii) similar transactions concerning

nearby plots of land with similar land use restrictions had taken place before and the values obtained were similar to the value of the pre-transaction valuation and were known to the surveyor.

- (34) With regard to the risk associated with the land sale, according to the Polish authorities the fact that the development plan had not been adopted by the city of Gdynia was not a real obstacle for the land forming the object of the sale to be classified as commercial and not industrial land. The Polish authorities explained the steps to be followed under Polish law prior to the adoption of the development plan, the town-planning study being part of that process. They referred to a ruling of the Supreme Administrative Court of Poland dated 6 August 2009 which stated that in practice, the study adopted by Gdynia was virtually equivalent to a local development plan. The court stated that administrative decisions such as construction permits should not contradict a study established for a particular city area. The study provided for the non-industrial use of Nauta's land.
- (35) The Polish authorities also provided documents to substantiate their claim, which stated that a commercial price had been obtained in 2009 in two sales of land neighbouring the assets of Nauta. The first case concerned contemporaneous evidence of the public sale of a nearby plot in April 2009 where the auction starting price quoted in the press announcement corresponded to the commercial value of Nauta's land per square metre as indicated in the 2009 valuation. The second case concerned the sale of another plot neighbouring the assets of Nauta in which a relatively small parcel of 0,5 hectare achieved a similar price per square metre.

Rate at which the bonds were issued

- (36) As regards the low interest rate at which the bonds were acquired by the IDA, the Polish authorities claimed that despite the lack of a formal credit rating, the interest rate properly reflected the risk involved. The IDA performed an analysis of the financial situation of Nauta prior to the transaction and concluded that the proposed interest rate guaranteed a sufficient risk-adjusted return. The Polish authorities drew the attention of the Commission to the following: (i) Nauta had made a profit in the 3 years prior to the transaction and had good financial perspectives, (ii) it had a large cash surplus and no interest-bearing debt, (iii) the value and quality of the collateral justified a low-risk premium, (iv) a higher

interest rate would jeopardise the objective of maximising the return on the IDA's capital investment in Nauta (shares).

(37) The Polish authorities also referred to the rating of the Crist Shipyard prepared by the IDA, before a transaction that was assessed by the Commission in a no aid decision dated 25 July 2012 ⁽¹⁰⁾. The Polish authorities even claimed that Nauta represented a slightly lower risk than Crist and therefore deserved the same (BBB) rating. Poland stated that the IDA's investment in Nauta bonds was an intra-group investment as the IDA was soon to become the majority shareholder in Nauta (see recital 7 above).

(38) To further support the claim that the IDA's investment in Nauta bonds was profitable, the Polish authorities provided an *ex post* study by [...]. Based on pre-transaction data, the study concludes that the return on the investment, including interest income and an increase in the value of the company, amounts to [$> 20\%$]. In addition, [...] underlines that intra-group investors would be ready to accept a lower risk-adjusted return than a third party. Overall, [...] confirmed that the transaction passed the private investor test.

2. THE SECOND MEASURE

(39) Concerning the Commission's doubts as regards the economic rationale behind the 2-year extension of the bond redemption by Nauta in 2011, Poland also supplied new information. It stated that in agreeing to postpone the redemption date the IDA took into account the following factors:

— the IDA's investment strategy for Nauta as the owner of the company;

— the positive financial situation of Nauta when the decision was taken to extend the maturity and the favourable forecast for the future;

— the improvement in the quality of the collateral following the addition of new property; the total value as appraised by a certified surveyor thus reached an estimated PLN [> 190] million;

— the fact that seven buyers expressed an interest in purchasing the land from Nauta even though Gdynia's development plan for the shipyard area was not yet complete;

— the likelihood that the Gdynia city authority would agree to adopt the development plan for the shipyard area before 2013.

IV. ASSESSMENT

1. EXISTENCE OF STATE AID WITHIN THE MEANING OF ARTICLE 107 (1) OF THE TREATY

(40) Under Article 107(1) of the Treaty, any aid granted by a Member State or through state resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market.

(41) The classification of a national measure as state aid presupposes that the following cumulative conditions are met: (1) the measure confers an advantage through state resources; (2) the advantage is selective; and (3) the measure distorts or threatens to distort competition and is capable of affecting trade between Member States.

1.1. EXISTENCE OF AN ADVANTAGE

(42) In order to determine whether the measure under investigation constitutes aid, it is necessary to establish whether Nauta received an economic advantage which it would not have obtained under normal market conditions, i.e. the conditions in which a private investor or operator would have provided financing to Nauta (the market economy investor principle or 'MEIP').

The first measure

(43) In order to determine whether the measure under examination is compatible with the MEIP, the Commission assessed whether, on the basis of the information available to the IDA at the time the decision was taken, a private operator would have bought Nauta's bonds under similar conditions.

⁽¹⁰⁾ Commission Decision C(2012) 5057 final of 25 July 2012 on the State aid SA.33114 (2012/C) (ex. 2011/NN) Alleged aid to CRIST Shipyard (OJ L 12, 16.1.2013, p. 38-50).

Analysis of the financial standing of Nauta

- (44) The Commission notes that before a decision to acquire Nauta's bonds was taken the IDA performed an analysis of the financial standing of the company and concluded that the proposed interest rate guaranteed a sufficient risk-adjusted return. The scope of the analysis included: the business strategy of Nauta, the historical and forecast financial data as well as the risk assessment. The Commission analysed the soundness of the assumptions underlying this analysis.
- (45) First, on the basis of the OECD's external publications of 2007, the Commission observes that the ship repair market on which Nauta conducts its main business activities had good prospects for growth. An OECD forecast for ship repairs showed that in 2007-2015 the market would grow by 110 %. The company was well-positioned to benefit from this market growth thanks to well-established commercial relationships with customers in Scandinavia and high-quality services that could successfully compete with the services provided by the cheaper but lower-quality shipyards in Russia. In this context, Nauta's investment in the assets of Gdynia Shipyard appeared to be justified by a reasonable expectation of expansion.
- (46) The validity of the assumptions contained in the business plan of 2009 was confirmed by the actual results of the company in the post-transaction period i.e. in 2010 and 2011. Whereas, as a result of the economic crisis, sales revenues in 2010 were lower than planned, the company reported a sales profit of more than PLN 18 million although the business plan predicted a loss of PLN 33 million. The company exceeded its sales revenue forecast in 2011 and again reported a much bigger sales profit than expected, PLN 25 million instead of the forecast PLN 10 million. These results confirm that the financial forecasts were not overly optimistic and that Nauta was able to compete successfully on the market despite an unfavourable overall economic situation.
- (47) Secondly, on the basis of the financial statements of the company, Nauta's business activity was profitable in the pre-transaction period of 2006-2008 as well as in 2009 – the year of the transaction (see Table 1 above). The company had a positive return on equity (ROE), return on sales (ROS) and return on assets (ROA). Financial projections suggested that the company would increase its sales revenue and sales profit. In view of the market prospects and the business strategy of the company this forecast appeared reasonable.
- (48) Thirdly, the risk associated with the investment was limited since prior to the transaction Nauta had a large cash surplus (more than PLN 34 million at the end of 2008) and no interest-bearing debt.
- (49) For the above reasons, the Commission concludes that the *ex ante* analysis performed by the IDA was based on reasonable assumptions and that the IDA behaved in the same way as a private investor.
- (50) Apart from assessing the analysis performed by the IDA prior to the investment, the Commission has also analysed whether the interest rate on the bonds was in line with the applicable reference rate. The interest rate at which Nauta's bonds were acquired by the IDA amounted to 5,15 % in the first year and 5,42 % in the second year, i.e. effectively 5,28 % p.a. Given that the base rate for Poland in November 2009 amounted to 4,53 %, the rate accepted by the IDA for the investment in Nauta's bonds would be higher than the applicable reference rate (composed of the base rate and relevant margin) provided that the rating of Nauta when the measure was applied was at least 'good' (BBB) and the collateral 'high'.

Nauta's rating

- (51) The Polish authorities could not communicate to the Commission Nauta's contemporaneous credit rating as the company did not have any interest-bearing debt when the bonds were issued. Therefore, the Commission compared the rating Nauta could have obtained with the rating attributed by the IDA to another Polish shipyard (Crist) prior to a transaction in 2010, which had been previously assessed by the Commission⁽¹⁾. The Polish authorities argued that the situation of Nauta was similar to the situation of Crist and therefore Nauta could have received the same rating.
- (52) The Commission first notes that Nauta's main market, the ship repair market, had good growth prospects. Like Crist, Nauta had been present on the market for a long time and had an established customer network and competitive position.
- (53) Secondly, although Crist reported higher net profits in the 3-year period prior to the transaction, Nauta recorded better profitability than Crist, as measured by ROA and ROS, during that period.

⁽¹⁾ See footnote 10.

- (54) Thirdly, Crist was highly indebted while Nauta did not have any interest-bearing debt, therefore the risk of default of the latter was lower. In addition Nauta had at the time of the transaction a significant cash surplus of more than PLN 34 million whereas Crist's cash surplus was less than PLN 9 million.
- (55) Fourthly, as discussed below, in both cases the value of the collateral covered the risk of the financing with a Loss Given Default (LGD) of between 0 and 30 %.
- (56) In the light of the above, the Commission considers that it was not unreasonable for the IDA to consider that Nauta's rating in 2009 could be assessed as similar to the rating of Crist, which was assessed by the IDA as BBB.

Value of the collateral

- (57) As regards the value of the collateral, Poland claimed that it should be assessed as 'high'. A high value of collateral should represent a LGD value of between 0 and 30 %. As the transaction's nominal value was PLN 120 million, the collateralisation would be high if the value of the collateral provided corresponded to a range between PLN 84 million and PLN 120 million.
- (58) The only *ex ante* appraisal of Nauta's land available to the IDA indicated a price of PLN [> 168] million on the basis of the assumption that the land could be used for commercial purposes, as envisaged by the city of Gdynia in its approved urban development study. This appraisal had been prepared by [...], a certified surveyor using the comparative method. This is one of the generally accepted methods for valuing land and is provided for in Polish law. The Commission notes that the valuation was based on similar transactions and that the surveyor was aware that similar values per square metre had been achieved in sales of neighbouring plots of land.
- (59) As the evaluation was based on the classification of the land as 'commercial', the Commission also analysed whether that assumption was founded. In that respect, the Commission takes note of the judgment of the Polish Supreme Administrative Court of 6 August 2009 which confirms that the urban development study prepared by the city of Gdynia constituted an important stage in amending the local development plan. The Court stated that administrative decisions such as construction permits issued for the land covered by the study should not be incompatible with the findings of that study. The study provided for the non-industrial use of Nauta's land.

- (60) The Commission also notes that in the sales of the plots of land bordering Nauta's land the prices achieved corresponded to the value of non-industrial land.
- (61) However, in view of the fact that the process of adopting the development plan had not been completed, the Commission considers that a hypothetical private investor would probably base its assessment not on the full value of the land after the change in the local development plan, but on a value that could be achieved quickly. The Commission notes that in order to establish a fire sale value for similar land in Gdynia the independent surveyors applied a coefficient of 0,5 to the market value ⁽¹²⁾. Whereas this ratio appears conservative, if it was applied to the land of Nauta it would still result in a value of PLN [> 84] million. Thus, even given very prudent assumptions, the LGD would be below 30 % and the collateral should be considered as high.
- (62) The Commission therefore concludes that the collateral accepted by the IDA was 'high'.

Conclusion on the first measure

- (63) The Commission concludes that the assumptions underlying the analysis of the financial standing of Nauta performed prior to the investment were reasonable and that the results of this analysis justified the conclusion that the proposed interest rate on the bonds guaranteed a market-conform risk-adjusted return.
- (64) Additionally, according to the reference rate Communication, considering a BBB rating, the high collateralisation and the reference rate of 4,53 % for Poland in November 2009, the bonds which the IDA acquired in 2009 should have been subject to an interest rate of 5,28 % (4,53 % + 75 bps), which is the effective rate actually accepted by the IDA.
- (65) The first measure therefore does not entail an advantage for Nauta.
- (66) The study conducted by [...] 3 years after the transaction, which shows the considerable profitability of the IDA's investment in Nauta bonds is not decisive in view of its *ex post* nature, but confirms this assessment.

⁽¹²⁾ Valuation of land belonging to Gdynia Shipyard dated 4 March 2009.

The second measure

- (67) In line with the private investor test the Commission has analysed whether a hypothetical private creditor would have agreed to the extension of the bonds' maturity until November 2013. The Commission compared the expected return in two scenarios (1) forced redemption of the bonds in 2011 and (2) redemption in 2013.
- (68) The Commission observes that in the first scenario the expected return would be equal to the value of the collateral. As mentioned in recital 61 above, a private creditor would probably base its assessment not on the full value of the land but on a value that could be achieved quickly, i.e. PLN [$>$ 84] million.
- (69) In the second scenario the expected return equals the full nominal value of the bonds, i.e. PLN 120 million plus interest of 8,46 % p.a. for 2 years (the interest applicable in this case equalled 1M WIBOR plus 3,7 %, which for the WIBOR in December 2011 resulted in a total interest rate of 8,46 %). The Commission notes that the expected return would be higher if the redemption period is extended until 2013. Even if Nauta defaulted in 2013 the collateral's value at that time is likely to be higher than in 2011. Firstly, the quality of the collateral was improved by adding a new property. The total value thus reached an estimated PLN [$>$ 190] million, as appraised by the certified surveyor. Secondly, the completion of the administrative procedures to change the local development plan (or progress in that direction) should lead to an increase in the price towards the full commercial value of the land as legal uncertainty for potential investors decreases.
- (70) It should also be taken into account that at the time of the initially planned bond redemption, the IDA was already the owner of Nauta and, as such, was also interested in maximising the return from the capital investment. Forced redemption in 2011 could undermine the viability of the overall strategy based on the acquisition of new assets and transfer of the business to a new location and lead to a decrease in the value of the whole company.

Conclusion on the second measure

- (71) In the light of the above, the Commission considers that a hypothetical private creditor would have preferred to agree to the extension of the bonds' maturity rather than forcing immediate redemption. The second measure therefore does not entail an advantage for Nauta.

1.2. CONCLUSION ON THE ADVANTAGE

- (72) On the basis of the new elements put forward by the Polish authorities and in view of the above findings, the Commission concludes that the company did not derive any undue advantage from the conditions under which the bonds were acquired by the IDA in 2009 and from the extension of the bonds' maturity in 2011.
- (73) In view of the fact that the elements indicating the existence of state aid within the meaning of Article 107(1) TFEU are cumulative, the absence of any one of them is decisive. There is therefore no need to analyse the other elements identified in recital 41 above.

HAS ADOPTED THIS DECISION:

Article 1

The measure which the Republic of Poland has implemented in favour of Nauta S.A. in the form of acquisition of bonds worth PLN 120 million at an effective interest rate of 5,28 % in 2009-2011 and 8,46 % in 2011-2013 does not constitute state aid within the meaning of Article 107(1) of the Treaty on the Functioning of the European Union.

Article 2

This Decision is addressed to the Republic of Poland.

Done at Brussels, 20 March 2013.

For the Commission
Joaquín ALMUNIA
Vice-President

COMMISSION IMPLEMENTING DECISION

of 25 October 2013

on the approval of the Bosch system for navigation-based preconditioning of the battery state of charge for hybrid vehicles as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council

(Text with EEA relevance)

(2013/529/EU)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emissions performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles⁽¹⁾, and in particular Article 12(4) thereof,

Whereas:

- (1) The supplier Robert Bosch Car Multimedia GmbH (the 'Applicant') submitted an application for the approval of a system for navigation-based preconditioning of the battery state of charge for hybrid vehicles as an innovative technology on 29 January 2013. The completeness of the application was assessed in accordance with Article 4 of Commission Implementing Regulation (EU) No 725/2011⁽²⁾. The application was found to be complete and the period granted to the Commission for its assessment of the application therefore started on the day after the receipt of the application, i.e. 30 January 2013.
- (2) The application has been assessed in accordance with Article 12 of Regulation (EC) No 443/2009, Implementing Regulation (EU) No 725/2011 and the Technical Guidelines for the preparation of applications for the approval of innovative technologies pursuant to Regulation (EC) No 443/2009 (the Technical Guidelines)⁽³⁾.
- (3) The application refers to a system for controlling the state of charge of a battery in a hybrid electric vehicle through a navigation system that continuously monitors the geospatial positioning of the vehicle and provides information on the slope profile of the driving route in order to estimate recuperation potentials on the route and to adapt the state of charge so that maximal energy utilisation and recuperation is realised. More precisely, when a vehicle goes uphill the electricity from the battery may be used to the maximum extent possible, thus achieving a higher degree of battery elec-

tricity utilisation compared to a vehicle with a conventional state of battery charge strategy. When the vehicle goes downhill the energy is used to charge the battery. In order to be eligible as an eco-innovation the system should be permanently active as part of the powertrain operating strategy.

- (4) The Commission finds that the information provided in the application demonstrates that the conditions and criteria referred to in Article 12 of Regulation (EC) No 443/2009 and in Articles 2 and 4 of Implementing Regulation (EU) No 725/2011 have been met.
- (5) The Applicant has demonstrated that the market penetration in 2009 of technologies of the kind described in the application did not exceed the threshold specified in Article 2(2)(a) of Implementing Regulation (EU) No 725/2011. This claim is also supported by the accompanying verification report. On that basis, the Commission finds that the system for navigation-based preconditioning of the battery state of charge for hybrid vehicles provided by the Applicant should be considered meeting the eligibility criterion set out in Article 2(2)(a) of Implementing Regulation (EU) No 725/2011.
- (6) In order to determine the CO₂ savings that the innovative technology will deliver when fitted to a vehicle, it is necessary to define the baseline vehicle against which the efficiency of the vehicle equipped with the innovative technology should be compared as provided for in Articles 5 and 8 of Implementing Regulation (EU) No 725/2011. The Commission finds that the baseline vehicle should be identical to the eco-innovation vehicle without the innovative technology activated.
- (7) The Applicant has provided a comprehensive methodology for testing the CO₂ reductions. In order to demonstrate the CO₂ saving effect of the technology, a testing methodology has been defined that reflects both speed and road slope profiles that are characteristic of European driving patterns and itineraries. The Applicant has derived the road slope profiles from information gathered from extensive real life test tracks and road slope data from across the EU. In order to provide the required representativeness, the road slope profiles have been paired with speed profiles that are close to the NEDC speed profile. For the lower speeds there are differences, but these lead to conservative values for the CO₂ emissions benefits of the innovative technology. The reference test cycle should be used for a set of roller dynamometer tests with activation and deactivation of the innovative technology. The Applicant has also calculated and demonstrated the temporal share of the technology usage in normal operation conditions (Usage

⁽¹⁾ OJ L 140, 5.6.2009, p. 1.

⁽²⁾ Commission Implementing Regulation (EU) No 725/2011 of 25 July 2011 establishing a procedure for the approval and certification of innovative technologies for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council (OJ L 194, 26.7.2011, p. 19).

⁽³⁾ http://ec.europa.eu/clima/policies/transport/vehicles/cars/docs/guidelines_en.pdf

Factor). The Commission finds that the test methodology and the reference test cycle provided by the Applicant is capable of demonstrating in a realistic manner the CO₂ emissions benefits of the innovative technology with strong statistical significance in accordance with Article 6 of Implementing Regulation (EU) No 725/2011.

- (8) The Commission finds that the Applicant has demonstrated satisfactorily that the emission reduction achieved by the innovative technology is at least 1 g CO₂/km for hybrid electric vehicles (HEV/PHEVs) as defined in Article 2(16) of Commission Regulation (EC) No 692/2008⁽¹⁾ with a mass in running order of 1 650 kg or more. For vehicles with a mass in running order below 1 650 kg, it has not been demonstrated that the savings are sufficiently high to meet the 1g CO₂/km threshold.
- (9) Since the CO₂ saving effects of the technology in question cannot be determined using the CO₂ emissions type approval test referred to in Regulation (EC) No 715/2007 of the European Parliament and of the Council⁽²⁾ and Regulation (EC) No 692/2008, the Commission is satisfied that the technology is not covered by the standard test cycle in accordance with Article 12(2)(c) of Regulation (EC) No 443/2009.
- (10) The Commission finds that the verification report has been prepared by TÜV SÜD Automotive GmbH which is an independent and certified body and that the report supports the findings set out in the application.
- (11) Against that background, the Commission finds that no objections should be raised as regards the approval of the innovative technology in question.
- (12) Any manufacturer wishing to benefit from a reduction of its average specific CO₂ emissions for the purpose of

meeting its specific emissions target by means of the CO₂ savings from the use of the innovative technology approved by this Decision, should in accordance with Article 11(1) of Implementing Regulation (EU) No 725/2011, refer to this Decision in its application for an EC type-approval certificate for the vehicles concerned,

HAS ADOPTED THIS DECISION:

Article 1

1. The use of the Bosch system for navigation-based preconditioning of the battery state of charge for hybrid vehicles is approved as an innovative technology within the meaning of Article 12 of Regulation (EC) No 443/2009 for the use on M1 hybrid electric vehicles with a mass in running order of 1 650 kg or more.
2. The CO₂ emissions reduction from the use of the Bosch system for navigation-based preconditioning of battery state of charge for hybrid vehicles referred to in paragraph 1 shall be determined using the methodology set out in the Annex.

Article 2

This Decision shall enter into force on the 20th day following that of its publication in the *Official Journal of the European Union*.

Done at Brussels, 25 October 2013.

For the Commission

The President

José Manuel BARROSO

⁽¹⁾ Commission Regulation (EC) No 692/2008 of 18 July 2008 of implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (euro 5 and euro 6) and on access to vehicle repair and maintenance information (OJ L 199, 28.7.2008, p. 1).

⁽²⁾ Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information (OJ L 171, 29.6.2007, p. 1).

ANNEX

THE TESTING METHODOLOGY, FORMULAS AND REQUIREMENTS ON THE VEHICLE SYSTEM**1. Introduction**

In order to determine the CO₂ reductions that can be attributed to the use of the Bosch system for a navigation-based preconditioning of battery state of charge for hybrid vehicles in an M1 vehicle with a mass in running order of 1 650 kg or more, it is necessary to establish the following:

- (1) the testing conditions;
- (2) the testing procedure;
- (3) the formulae;
- (4) eco-innovation code to be entered into type approval documentation.

Appendix: The test sequence parameters

2. The testing conditions

The following conditions shall be met:

- (a) Eco-innovation vehicle: A vehicle with the innovative technology activated. The navigation system of the innovative technology has to be able to use the GPS-time data specified in Table 2 of the Appendix for performing the test cycle.
- (b) Baseline vehicle: A vehicle identical to the eco-innovation vehicle with the innovative technology deactivated. This deactivation can be established by not providing GPS-time data to the navigation system. For the purpose of the roller bench test, it must be possible to activate and deactivate the usage of the innovative technology⁽¹⁾.
- (c) The roller test bench shall be able to test hybrid electric vehicles (PHEV/HEV) and shall be able to support road slope profiles. Given the variety of hybrid powertrain architectures, a four wheel enabled test bench is required.

3. The testing procedure

The emissions of CO₂, fuel consumption and electric energy consumption of the tested vehicles are to be measured in accordance with UN/ECE Regulation No 101. Only the speed profiles and the test bench settings shall be modified according to the following:

Test bench

- The slope-time data specified in Table 1 in the Appendix shall be used as control input for the roller test bench.
- The speed-time data specified in Table 1 shall be used as instructions for the test driver for performing the test. The speed and time tolerances shall be in accordance with paragraph 1.4 of Annex 7 to UN/ECE Regulation No 101.

Pre-conditioning of the vehicle

One complete test cycle shall be performed, with the innovative technology deactivated to reach the standard hot testing conditions of engine, electric motor and battery with regard to temperatures and state of charge, i.e. a state of charge of 50–60 percent.

Navigation system

During the test of the eco-innovation vehicle, the navigation system has to simulate the GPS position of the vehicle using the GPS-time data provided in Table 2 in the Appendix using one of the following methodologies:

- (a) The GPS-time data is provided to the navigation system using a data carrier (e.g. SD-Card, USB-Stick, DVD) plugged into the navigation device. The GPS data stored into the data carrier shall be as a text data in a file (e.g. '.csv') or as a file format comprehensibly generated from the GPS system.
- (b) The GPS-time data is used as input for a GPS-Signal Generator that is part of the roller dynamometer setting. The GPS-Signal Generator and the roller dynamometer shall be synchronized on a time basis.

⁽¹⁾ This condition shall only apply for the test. Under normal driving conditions the innovative technology shall always be activated.

Executing the tests

To synchronise the roller dynamometer movement with the output of the navigation system, both systems (test bench and the navigation system) have to be started at the same point in time (± 1 s).

Number of tests

The complete test procedure on the test bench shall be repeated at least two times. The arithmetic means of the CO₂ emissions from the eco-innovation vehicle, and of the baseline vehicle and the respective variation coefficients of the means shall be calculated. Further test repetitions on the dynamometer are required until the variation coefficients of both arithmetic means are below 1 %.

4. Formulae

1. The formula to calculate the CO₂ savings of the eco-innovation is:

$$\text{Formula (1)} \quad C_{\text{CO}_2} = (B_{\text{MC}} - E_{\text{MC}}) \cdot \text{UF}$$

Where:

$$C_{\text{CO}_2} = \text{CO}_2 \text{ savings [g CO}_2\text{/km]}$$

$$\text{UF} = 0,15 \text{ (temporal share of the technology usage in normal operation conditions)}$$

$$B_{\text{MC}} = \text{CO}_2 \text{ emissions of the baseline vehicle using the reference test cycle [g CO}_2\text{/km]}$$

$$E_{\text{MC}} = \text{CO}_2 \text{ emissions of the eco-innovation vehicle using the reference test cycle [g CO}_2\text{/km]}$$

The arithmetic means of the CO₂ emissions shall be rounded to 1 decimal place.

2. The formula to calculate the *variation coefficient* of the mean is:

$$\text{Formula (2)} \quad c_v = S_{\bar{x}}/\bar{x}$$

Where:

$$c_v = \text{variation coefficient;}$$

$$S_{\bar{x}} = \text{standard deviation of arithmetic mean [g CO}_2\text{/km]}$$

$$\bar{x} = \text{arithmetic mean for } B_{\text{MC}} \text{ and } E_{\text{MC}} \text{ [g CO}_2\text{/km]}$$

3. The formula to calculate the standard deviation of the arithmetic mean is:

$$\text{Formula (3)} \quad S_{\bar{x}} = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n(n-1)}}$$

Where:

$$S_{\bar{x}} = \text{standard deviation of arithmetic mean [g CO}_2\text{/km]}$$

$$x_i = \text{measurement value [g CO}_2\text{/km]}$$

$$\bar{x} = \text{arithmetic mean [g CO}_2\text{/km]}$$

$$N = \text{number of measurements.}$$

5. Eco-innovation code to be entered into type approval documentation

For the purposes of determining the general eco-innovation code to be used in the relevant type approval documents in accordance with Annexes I, VIII and IX to Directive 2007/46/EC of the European Parliament and of the Council ⁽¹⁾, the individual code to be used for the innovative technology approved through this Decision shall be '4'.

For example, the code of the eco-innovation in the case of eco-innovation savings certified by the German type approval authority shall be 'e1 4'.

⁽¹⁾ Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive) (OJ L 263, 9.10.2007, p. 1).

Appendix

Test sequence parameters

Figure 1

Speed profile

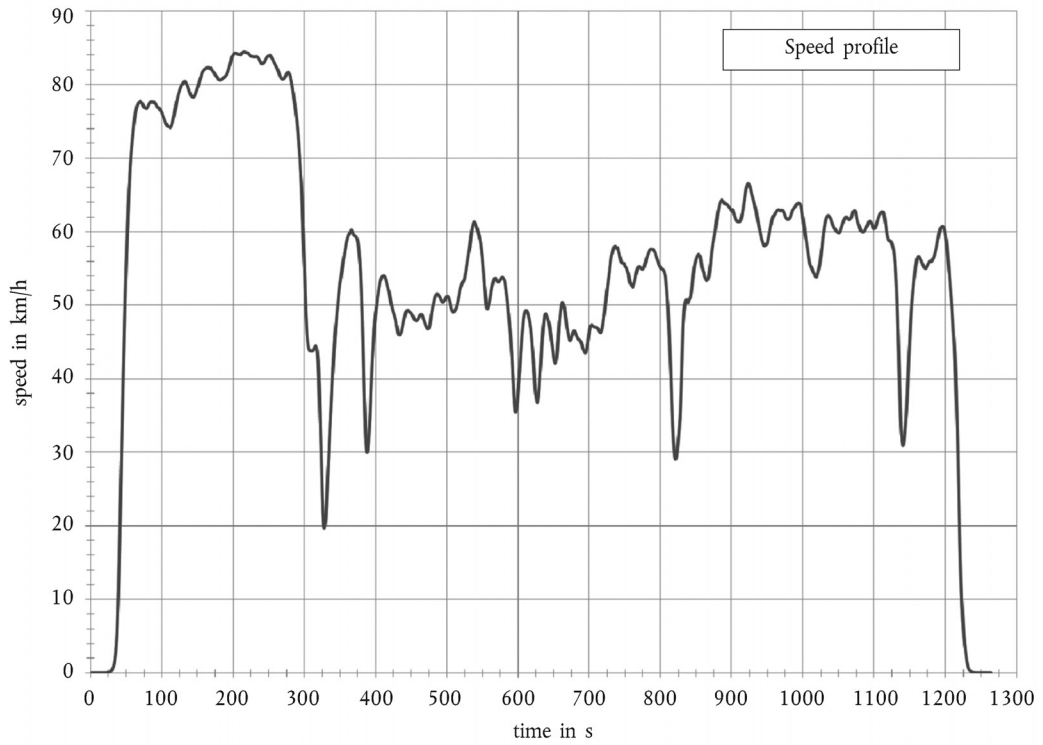


Figure 2

Slope time

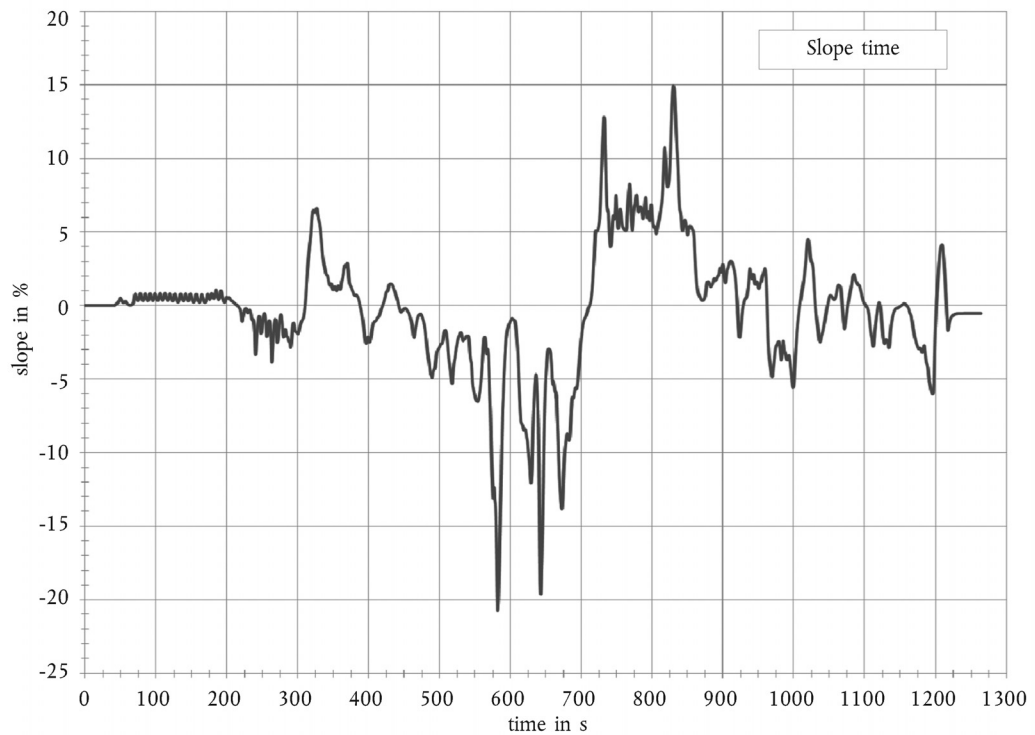


Table 1
Speed profile and slope-time

Speed profile and slope time date											
Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %
0	0,0	0,0									
1	0,0	0,0	51	58,1	0,4	101	75,9	0,5	151	79,8	0,4
2	0,0	0,0	52	60,8	0,3	102	75,6	0,4	152	80,1	0,3
3	0,0	0,0	53	63,3	0,2	103	75,5	0,3	153	80,5	0,2
4	0,0	0,0	54	65,6	0,2	104	75,1	0,5	154	80,8	0,2
5	0,0	0,0	55	67,6	0,2	105	74,9	0,8	155	81,1	0,4
6	0,0	0,0	56	69,3	0,3	106	74,7	0,8	156	81,4	0,7
7	0,0	0,0	57	70,7	0,3	107	74,5	0,6	157	81,7	0,8
8	0,0	0,0	58	71,8	0,2	108	74,4	0,5	158	81,8	0,6
9	0,0	0,0	59	72,8	0,1	109	74,3	0,4	159	82,0	0,4
10	0,0	0,0	60	73,8	0,1	110	74,3	0,4	160	82,1	0,3
11	0,0	0,0	61	74,7	0,1	111	74,2	0,5	161	82,1	0,2
12	0,0	0,0	62	75,5	0,0	112	74,2	0,8	162	82,2	0,2
13	0,0	0,0	63	76,1	0,0	113	74,3	0,8	163	82,3	0,4
14	0,0	0,0	64	76,6	0,0	114	74,5	0,6	164	82,3	0,7
15	0,0	0,0	65	77,0	0,0	115	74,9	0,5	165	82,3	0,8
16	0,0	0,0	66	77,3	0,0	116	75,3	0,4	166	82,3	0,6
17	0,0	0,0	67	77,5	0,1	117	75,7	0,3	167	82,2	0,4
18	0,0	0,0	68	77,6	0,2	118	76,2	0,5	168	82,2	0,3
19	0,0	0,0	69	77,6	0,3	119	76,7	0,8	169	82,3	0,2
20	0,0	0,0	70	77,8	0,7	120	77,2	0,8	170	82,1	0,2
21	0,0	0,0	71	77,6	0,8	121	77,7	0,6	171	81,9	0,4
22	0,0	0,0	72	77,5	0,6	122	78,2	0,4	172	81,8	0,7
23	0,0	0,0	73	77,3	0,5	123	78,6	0,3	173	81,6	0,8
24	0,0	0,0	74	77,1	0,3	124	78,9	0,3	174	81,5	0,6
25	0,1	0,0	75	77,0	0,3	125	79,2	0,4	175	81,3	0,5
26	0,1	0,0	76	76,9	0,4	126	79,5	0,7	176	81,2	0,4
27	0,1	0,0	77	76,8	0,7	127	79,7	0,8	177	81,0	0,5
28	0,2	0,0	78	76,8	0,8	128	79,9	0,6	178	80,9	0,8
29	0,3	0,0	79	76,8	0,6	129	80,1	0,4	179	80,7	0,8
30	0,4	0,0	80	76,9	0,5	130	80,2	0,3	180	80,7	0,6
31	0,6	0,0	81	77,1	0,3	131	80,3	0,2	181	80,6	0,5
32	0,8	0,0	82	77,4	0,3	132	80,4	0,3	182	80,6	0,5
33	1,2	0,0	83	77,4	0,4	133	80,4	0,4	183	80,6	0,6
34	1,7	0,0	84	77,6	0,7	134	80,2	0,7	184	80,7	1,0
35	2,5	0,0	85	77,7	0,8	135	80,1	0,8	185	80,8	1,1
36	3,5	0,0	86	77,7	0,6	136	79,8	0,6	186	80,8	0,8
37	5,0	0,0	87	77,6	0,4	137	79,6	0,4	187	80,9	0,6
38	7,2	0,0	88	77,6	0,3	138	79,3	0,3	188	81,0	0,4
39	10,3	0,0	89	77,7	0,3	139	79,0	0,3	189	81,1	0,4
40	14,2	0,0	90	77,5	0,5	140	78,7	0,4	190	81,2	0,6
41	18,4	0,0	91	77,4	0,8	141	78,5	0,8	191	81,4	1,0
42	22,8	0,0	92	77,3	0,8	142	78,4	0,8	192	81,6	1,0
43	27,3	0,0	93	77,1	0,6	143	78,3	0,6	193	81,9	0,7
44	31,9	0,1	94	77,0	0,5	144	78,3	0,4	194	82,2	0,5
45	36,4	0,1	95	76,9	0,3	145	78,3	0,3	195	82,5	0,3
46	40,5	0,2	96	76,8	0,3	146	78,5	0,3	196	82,9	0,2
47	44,5	0,2	97	76,7	0,5	147	78,7	0,4	197	83,2	0,2
48	48,3	0,3	98	76,5	0,8	148	78,9	0,7	198	83,6	0,3
49	51,9	0,5	99	76,4	0,8	149	79,2	0,8	199	83,8	0,5
50	55,2	0,5	100	76,1	0,6	150	79,5	0,6	200	84,0	0,6

Speed profile and slope time date

Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %
201	84,2	0,5	256	83,3	- 2,1	311	43,8	0,3	366	60,2	2,7
202	84,2	0,5	257	83,1	- 2,1	312	43,8	1,0	367	60,1	2,7
203	84,3	0,5	258	82,9	- 1,6	313	44,0	1,8	368	59,9	2,6
204	84,3	0,5	259	82,7	- 1,2	314	44,2	2,7	369	59,6	2,7
205	84,2	0,4	260	82,5	- 1,0	315	44,4	3,2	370	59,5	2,9
206	84,2	0,3	261	82,4	- 1,3	316	44,5	3,7	371	59,4	2,5
207	84,1	0,3	262	82,1	- 2,1	317	44,3	4,2	372	59,4	1,9
208	84,1	0,3	263	81,9	- 3,9	318	43,7	4,7	373	59,3	1,5
209	84,1	0,2	264	81,7	- 3,8	319	42,6	5,3	374	59,0	1,3
210	84,1	0,2	265	81,4	- 2,8	320	40,9	6,0	375	58,7	1,3
211	84,1	0,2	266	81,2	- 1,9	321	38,5	6,4	376	58,0	1,1
212	84,3	0,1	267	80,9	- 1,3	322	35,4	6,5	377	57,1	1,0
213	84,3	0,1	268	80,8	- 1,0	323	31,9	6,4	378	55,9	0,9
214	84,4	0,0	269	80,7	- 1,0	324	28,1	6,3	379	54,2	0,8
215	84,4	0,0	270	80,7	- 1,5	325	24,6	6,4	380	52,0	0,7
216	84,4	- 0,1	271	80,8	- 2,5	326	21,8	6,6	381	49,3	0,7
217	84,4	- 0,1	272	80,8	- 2,4	327	20,1	6,6	382	46,1	0,7
218	84,4	- 0,2	273	81,0	- 1,8	328	19,7	6,2	383	42,6	0,7
219	84,3	- 0,3	274	81,2	- 1,2	329	20,1	5,9	384	38,9	0,6
220	84,3	- 0,6	275	81,4	- 0,8	330	21,1	5,7	385	35,4	0,5
221	84,3	- 1,0	276	81,5	- 0,6	331	22,7	5,5	386	32,6	0,4
222	84,2	- 1,1	277	81,6	- 0,7	332	24,7	5,1	387	30,7	0,2
223	84,0	- 0,8	278	81,6	- 1,0	333	27,0	4,6	388	30,0	0,0
224	83,9	- 0,5	279	81,4	- 1,8	334	29,2	4,0	389	30,3	- 0,3
225	83,9	- 0,3	280	81,2	- 2,1	335	31,3	3,5	390	31,3	- 0,5
226	83,9	- 0,2	281	80,7	- 1,9	336	33,3	3,0	391	32,9	- 0,8
227	83,8	- 0,2	282	80,3	- 1,6	337	35,3	2,8	392	34,7	- 1,1
228	83,8	- 0,3	283	79,7	- 1,7	338	37,2	2,6	393	36,8	- 1,5
229	83,8	- 0,5	284	79,1	- 2,1	339	39,0	2,3	394	39,1	- 1,9
230	83,8	- 0,5	285	78,5	- 2,1	340	40,9	2,1	395	41,3	- 2,3
231	83,8	- 0,4	286	77,8	- 2,2	341	42,6	2,1	396	43,4	- 2,6
232	83,8	- 0,3	287	77,1	- 2,4	342	44,2	2,0	397	45,2	- 2,6
233	83,8	- 0,3	288	76,3	- 2,4	343	45,7	1,8	398	46,7	- 2,3
234	83,7	- 0,5	289	75,5	- 2,5	344	46,9	1,5	399	47,9	- 2,1
235	83,7	- 0,9	290	74,5	- 2,9	345	48,0	1,4	400	48,9	- 2,3
236	83,5	- 1,0	291	73,5	- 2,5	346	49,1	1,4	401	49,7	- 2,5
237	83,4	- 1,0	292	72,3	- 1,9	347	50,2	1,5	402	50,5	- 2,5
238	83,2	- 1,2	293	71,1	- 1,4	348	51,2	1,3	403	51,2	- 2,2
239	83,0	- 1,9	294	69,6	- 1,2	349	52,1	1,2	404	51,8	- 1,9
240	82,8	- 3,3	295	67,9	- 1,3	350	52,9	1,1	405	52,5	- 1,6
241	82,8	- 3,3	296	66,0	- 1,7	351	53,6	1,1	406	53,0	- 1,3
242	82,9	- 2,4	297	63,8	- 1,8	352	54,2	1,3	407	53,4	- 1,1
243	83,0	- 1,6	298	61,2	- 1,8	353	54,8	1,2	408	53,7	- 1,1
244	83,1	- 1,1	299	58,4	- 1,9	354	55,5	1,1	409	53,8	- 1,1
245	83,3	- 0,8	300	55,3	- 1,9	355	56,2	1,0	410	53,9	- 1,0
246	83,5	- 0,7	301	52,4	- 1,9	356	56,8	1,1	411	54,0	- 1,0
247	83,7	- 1,1	302	49,7	- 1,7	357	57,4	1,3	412	54,0	- 0,9
248	83,8	- 1,9	303	47,5	- 1,4	358	58,0	1,3	413	53,9	- 0,8
249	83,8	- 1,8	304	46,0	- 1,3	359	58,5	1,1	414	53,6	- 0,8
250	83,9	- 1,4	305	44,9	- 1,1	360	58,9	1,1	415	53,3	- 0,7
251	83,9	- 0,9	306	44,3	- 1,0	361	59,3	1,3	416	52,9	- 0,5
252	84,0	- 0,6	307	43,9	- 0,9	362	59,5	1,7	417	52,5	- 0,4
253	83,8	- 0,5	308	43,8	- 0,8	363	59,7	1,8	418	52,1	- 0,2
254	83,7	- 0,7	309	43,8	- 0,5	364	59,9	2,1	419	51,7	- 0,1
255	83,5	- 1,1	310	43,8	- 0,2	365	59,9	2,5	420	51,2	0,0

Speed profile and slope time date

Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %
417	52,5	- 0,4	472	46,9	- 0,6	527	54,8	- 2,2	582	52,8	- 20,7
418	52,1	- 0,2	473	46,8	- 0,6	528	55,4	- 2,0	583	52,1	- 20,2
419	51,7	- 0,1	474	46,8	- 0,6	529	56,1	- 2,0	584	51,4	- 18,1
420	51,2	0,0	475	46,9	- 0,7	530	56,7	- 1,9	585	50,5	- 15,7
421	50,7	0,2	476	47,3	- 0,9	531	57,3	- 1,9	586	49,5	- 13,7
422	50,2	0,3	477	47,9	- 1,0	532	57,9	- 2,2	587	48,5	- 11,6
423	49,7	0,5	478	48,5	- 1,2	533	58,6	- 2,4	588	47,5	- 9,0
424	49,3	0,7	479	49,1	- 1,4	534	59,3	- 2,3	589	46,4	- 7,2
425	49,0	0,9	480	49,7	- 1,8	535	60,1	- 2,3	590	45,0	- 6,1
426	48,7	1,0	481	50,1	- 2,2	536	60,7	- 2,3	591	43,6	- 4,8
427	48,4	1,0	482	50,5	- 2,7	537	61,1	- 2,1	592	41,8	- 3,9
428	48,0	1,2	483	50,9	- 3,2	538	61,3	- 2,1	593	39,9	- 3,0
429	47,5	1,4	484	51,2	- 3,5	539	61,3	- 2,1	594	38,0	- 2,3
430	46,9	1,5	485	51,4	- 3,8	540	61,2	- 2,1	595	36,4	- 1,8
431	46,5	1,5	486	51,5	- 4,2	541	60,9	- 2,2	596	35,5	- 1,6
432	46,1	1,4	487	51,5	- 4,6	542	60,6	- 2,6	597	35,5	- 1,5
433	46,0	1,4	488	51,4	- 4,7	543	60,3	- 3,4	598	36,0	- 1,3
434	46,0	1,3	489	51,3	- 4,9	544	60,0	- 3,8	599	37,0	- 1,2
435	46,1	1,2	490	51,1	- 4,9	545	59,6	- 4,0	600	38,2	- 1,1
436	46,4	1,1	491	50,9	- 4,6	546	59,2	- 4,9	601	39,6	- 1,0
437	46,7	0,9	492	50,7	- 4,4	547	58,7	- 5,4	602	41,0	- 0,9
438	47,2	0,8	493	50,5	- 4,3	548	58,0	- 5,7	603	42,3	- 0,9
439	47,7	0,6	494	50,4	- 4,1	549	57,2	- 5,9	604	43,8	- 1,0
440	48,2	0,5	495	50,5	- 3,6	550	56,3	- 6,2	605	45,2	- 1,0
441	48,6	0,3	496	50,6	- 3,2	551	55,2	- 6,3	606	46,4	- 1,0
442	48,9	0,1	497	50,7	- 3,0	552	53,9	- 6,4	607	47,4	- 1,2
443	49,1	- 0,1	498	50,9	- 3,0	553	52,6	- 6,5	608	48,3	- 1,6
444	49,3	- 0,3	499	51,1	- 2,9	554	51,4	- 6,5	609	48,8	- 2,2
445	49,4	- 0,4	500	51,2	- 2,8	555	50,4	- 6,4	610	49,1	- 2,9
446	49,3	- 0,4	501	51,2	- 2,7	556	49,7	- 6,2	611	49,3	- 3,9
447	49,2	- 0,4	502	51,1	- 2,6	557	49,5	- 5,8	612	49,3	- 5,3
448	49,1	- 0,3	503	50,9	- 2,6	558	49,7	- 5,4	613	49,1	- 6,3
449	49,0	- 0,3	504	50,5	- 2,6	559	50,1	- 4,9	614	48,8	- 7,3
450	48,9	- 0,2	505	50,1	- 2,3	560	50,5	- 4,3	615	48,4	- 7,9
451	48,8	- 0,2	506	49,7	- 2,0	561	51,1	- 3,5	616	47,9	- 8,0
452	48,6	- 0,2	507	49,4	- 1,8	562	51,8	- 2,8	617	47,3	- 8,1
453	48,4	- 0,2	508	49,2	- 1,7	563	52,3	- 2,2	618	46,6	- 8,3
454	48,2	- 0,3	509	49,1	- 1,8	564	52,7	- 2,2	619	45,6	- 8,5
455	48,1	- 0,4	510	49,1	- 2,0	565	53,1	- 2,6	620	44,4	- 8,5
456	47,9	- 0,5	511	49,2	- 2,5	566	53,4	- 3,3	621	43,0	- 8,4
457	47,9	- 0,5	512	49,4	- 3,1	567	53,6	- 3,3	622	41,5	- 8,7
458	47,9	- 0,7	513	49,6	- 3,5	568	53,7	- 3,0	623	39,9	- 9,0
459	48,0	- 0,9	514	49,9	- 3,9	569	53,6	- 3,3	624	38,6	- 9,2
460	48,2	- 1,0	515	50,3	- 4,3	570	53,4	- 4,4	625	37,6	- 9,8
461	48,4	- 1,3	516	50,7	- 4,7	571	53,2	- 6,0	626	37,0	- 10,3
462	48,6	- 1,6	517	51,2	- 5,1	572	53,1	- 7,4	627	36,8	- 10,7
463	48,7	- 2,0	518	51,8	- 5,3	573	53,2	- 9,6	628	37,1	- 11,6
464	48,7	- 2,2	519	52,2	- 4,7	574	53,3	- 11,1	629	38,0	- 12,1
465	48,7	- 1,9	520	52,6	- 4,0	575	53,4	- 12,2	630	39,3	- 11,5
466	48,5	- 1,6	521	52,9	- 3,7	576	53,6	- 13,1	631	40,8	- 10,1
467	48,2	- 1,4	522	53,1	- 3,5	577	53,7	- 12,4	632	42,4	- 8,4
468	47,9	- 1,1	523	53,2	- 3,1	578	53,8	- 13,2	633	43,9	- 6,7
469	47,6	- 0,9	524	53,4	- 2,8	579	53,7	- 13,7	634	45,3	- 5,7
470	47,4	- 0,7	525	53,7	- 2,6	580	53,6	- 15,3	635	46,6	- 5,0
471	47,1	- 0,7	526	54,2	- 2,4	581	53,3	- 18,2	636	47,6	- 4,7

Speed profile and slope time date

Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %
633	43,9	- 6,7	688	45,0	- 6,2	743	56,6	4,8	798	55,6	6,4
634	45,3	- 5,7	689	44,8	- 6,3	744	56,2	5,6	799	55,3	6,9
635	46,6	- 5,0	690	44,5	- 6,0	745	55,9	6,1	800	55,1	6,2
636	47,6	- 4,7	691	44,1	- 5,7	746	55,8	5,9	801	55,0	5,5
637	48,4	- 4,8	692	43,8	- 5,6	747	55,7	5,9	802	54,9	5,3
638	48,8	- 5,7	693	43,6	- 5,7	748	55,7	6,7	803	54,9	5,4
639	48,8	- 7,3	694	43,5	- 5,6	749	55,7	7,5	804	54,8	5,4
640	48,7	- 9,9	695	43,5	- 5,2	750	55,3	6,6	805	54,6	5,1
641	48,4	- 13,7	696	43,8	- 4,5	751	55,2	5,7	806	54,2	4,9
642	48,1	- 17,9	697	44,3	- 3,9	752	55,1	5,2	807	53,9	5,1
643	47,7	- 19,6	698	45,0	- 3,3	753	54,8	5,6	808	53,0	5,4
644	47,2	- 18,0	699	45,8	- 2,7	754	54,5	6,3	809	51,8	5,7
645	46,7	- 16,0	700	46,4	- 2,1	755	54,1	6,5	810	50,4	5,8
646	45,9	- 13,4	701	47,0	- 1,7	756	53,6	6,2	811	48,7	6,1
647	45,1	- 10,5	702	47,2	- 1,4	757	53,1	5,7	812	46,8	6,4
648	44,3	- 8,0	703	47,3	- 1,1	758	53,0	5,4	813	44,7	6,8
649	43,6	- 6,2	704	47,3	- 1,0	759	52,7	5,3	814	42,2	7,2
650	42,9	- 5,0	705	47,2	- 0,9	760	52,7	5,2	815	39,5	7,8
651	42,4	- 4,1	706	47,1	- 0,8	761	52,5	5,1	816	36,6	8,8
652	42,1	- 3,4	707	47,0	- 0,7	762	52,7	5,1	817	33,9	9,9
653	42,2	- 3,0	708	47,0	- 0,5	763	53,0	5,1	818	31,9	10,7
654	42,8	- 3,0	709	47,0	- 0,3	764	53,5	5,3	819	30,5	10,1
655	43,8	- 3,0	710	47,0	- 0,2	765	54,0	6,2	820	29,7	9,0
656	45,0	- 3,1	711	46,9	- 0,1	766	54,5	7,1	821	29,1	8,3
657	46,4	- 3,3	712	46,8	0,0	767	54,8	7,8	822	29,2	8,1
658	47,7	- 4,1	713	46,7	0,2	768	55,0	8,3	823	29,8	8,2
659	48,7	- 5,1	714	46,4	0,5	769	55,2	7,8	824	30,6	8,5
660	49,5	- 5,4	715	46,3	0,9	770	55,3	6,6	825	31,6	9,2
661	50,2	- 5,2	716	46,3	1,5	771	55,2	5,5	826	32,7	10,3
662	50,4	- 5,6	717	46,5	2,2	772	55,1	5,1	827	34,0	11,9
663	50,4	- 5,8	718	46,9	3,1	773	55,0	5,6	828	35,5	13,4
664	50,1	- 5,9	719	47,5	4,2	774	54,9	6,4	829	38,0	14,4
665	49,6	- 6,3	720	48,1	5,0	775	54,9	6,8	830	41,2	14,9
666	49,0	- 7,5	721	48,9	5,1	776	55,0	6,9	831	44,6	14,8
667	48,3	- 8,9	722	49,7	5,1	777	55,2	7,3	832	47,4	14,0
668	47,5	- 10,4	723	50,6	5,1	778	55,5	7,5	833	49,0	13,1
669	46,8	- 11,7	724	51,4	5,3	779	55,9	7,0	834	49,9	11,9
670	46,2	- 12,6	725	52,2	5,6	780	56,2	6,4	835	50,4	10,7
671	45,7	- 13,3	726	52,9	6,0	781	56,5	6,4	836	50,7	9,9
672	45,3	- 13,8	727	53,7	6,8	782	56,9	6,6	837	50,7	8,9
673	45,2	- 13,8	728	54,5	8,1	783	57,1	6,7	838	50,4	7,5
674	45,3	- 13,0	729	55,3	9,5	784	57,4	6,7	839	50,4	6,6
675	45,5	- 11,6	730	56,1	10,8	785	57,5	6,6	840	50,7	6,4
676	45,9	- 10,5	731	56,7	11,9	786	57,6	6,3	841	50,9	6,1
677	46,2	- 9,8	732	57,1	12,8	787	57,6	5,9	842	51,0	5,4
678	46,4	- 9,3	733	57,4	12,6	788	57,6	6,1	843	51,4	5,1
679	46,5	- 8,9	734	57,7	10,5	789	57,6	6,7	844	52,3	5,3
680	46,4	- 8,7	735	57,9	8,2	790	57,5	7,2	845	53,2	5,7
681	46,1	- 8,8	736	58,0	6,8	791	57,4	7,3	846	54,0	5,8
682	45,8	- 9,0	737	58,0	6,4	792	57,2	6,5	847	54,8	5,8
683	45,6	- 9,2	738	57,8	6,5	793	56,9	6,0	848	55,4	5,5
684	45,4	- 8,9	739	57,7	5,6	794	56,6	6,2	849	55,9	5,2
685	45,3	- 8,1	740	57,8	4,5	795	56,4	6,4	850	56,2	4,8
686	45,3	- 7,0	741	57,3	4,0	796	56,1	5,9	851	56,5	4,9
687	45,2	- 6,4	742	57,0	4,1	797	55,9	5,8	852	56,7	5,3

Speed profile and slope time date

Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %
849	55,9	5,2	904	62,1	1,6	959	62,2	2,5	1 014	54,6	1,7
850	56,2	4,8	905	61,9	2,0	960	62,3	2,3	1 015	54,4	2,1
851	56,5	4,9	906	61,6	2,4	961	62,5	1,7	1 016	54,2	2,6
852	56,7	5,3	907	61,5	2,5	962	62,6	0,6	1 017	54,0	3,1
853	56,9	5,4	908	61,4	2,7	963	62,8	- 1,0	1 018	53,9	3,8
854	56,9	5,4	909	61,4	2,9	964	62,9	- 2,5	1 019	53,8	4,3
855	56,8	5,4	910	61,4	3,0	965	62,9	- 3,4	1 020	54,1	4,5
856	56,5	5,3	911	61,4	3,0	966	63,0	- 3,8	1 021	54,4	4,4
857	56,0	5,2	912	61,5	3,0	967	63,0	- 4,1	1 022	54,8	3,9
858	55,4	5,1	913	61,7	2,9	968	62,9	- 4,5	1 023	55,3	3,4
859	55,0	4,7	914	62,0	2,8	969	62,9	- 4,8	1 024	55,8	3,1
860	54,6	3,9	915	62,5	2,6	970	62,9	- 4,8	1 025	56,5	2,9
861	54,4	3,0	916	63,0	2,4	971	62,9	- 4,3	1 026	57,3	2,8
862	53,9	2,1	917	63,7	2,1	972	62,8	- 3,9	1 027	58,1	2,6
863	53,7	1,5	918	64,4	1,7	973	62,7	- 3,5	1 028	59,0	1,9
864	53,5	1,1	919	65,0	1,1	974	62,4	- 3,0	1 029	59,8	1,1
865	53,4	0,8	920	65,7	0,2	975	62,2	- 2,8	1 030	60,5	0,3
866	53,5	0,7	921	66,1	- 0,7	976	61,9	- 2,7	1 031	61,1	- 0,3
867	53,7	0,7	922	66,4	- 1,5	977	61,8	- 2,6	1 032	61,5	- 0,8
868	54,0	0,5	923	66,5	- 2,1	978	61,7	- 2,5	1 033	61,9	- 1,2
869	54,6	0,4	924	66,5	- 2,2	979	61,7	- 2,5	1 034	62,1	- 1,6
870	55,4	0,3	925	66,3	- 1,7	980	61,7	- 2,7	1 035	62,2	- 2,0
871	56,4	0,3	926	66,0	- 1,2	981	61,8	- 3,3	1 036	62,2	- 2,4
872	57,3	0,4	927	65,6	- 0,6	982	62,0	- 3,7	1 037	62,1	- 2,5
873	58,0	0,4	928	65,2	- 0,2	983	62,2	- 3,6	1 038	61,9	- 2,3
874	58,6	0,5	929	64,8	0,0	984	62,6	- 3,0	1 039	61,7	- 2,1
875	59,1	0,6	930	64,4	0,2	985	62,8	- 2,4	1 040	61,4	- 1,9
876	59,6	1,0	931	64,1	0,4	986	63,0	- 2,7	1 041	61,2	- 1,8
877	60,2	1,4	932	63,7	0,5	987	63,1	- 3,1	1 042	60,9	- 1,5
878	61,0	1,6	933	63,3	0,5	988	63,3	- 3,3	1 043	60,6	- 1,2
879	61,6	1,6	934	62,9	0,7	989	63,4	- 3,5	1 044	60,5	- 1,0
880	62,2	1,6	935	62,4	1,0	990	63,5	- 3,7	1 045	60,4	- 0,7
881	62,7	1,5	936	61,9	1,5	991	63,7	- 3,7	1 046	60,2	- 0,4
882	63,2	1,3	937	61,4	2,1	992	63,8	- 3,6	1 047	60,1	- 0,1
883	63,7	1,3	938	60,8	2,5	993	63,9	- 3,4	1 048	60,0	0,1
884	64,0	1,3	939	60,4	2,2	994	63,9	- 3,6	1 049	59,9	0,4
885	64,2	1,4	940	59,9	1,9	995	63,8	- 4,0	1 050	59,8	0,6
886	64,3	1,5	941	59,5	1,8	996	63,8	- 4,5	1 051	59,9	0,7
887	64,3	1,7	942	59,0	2,0	997	63,6	- 4,9	1 052	60,0	0,7
888	64,1	1,8	943	58,8	2,1	998	63,1	- 5,4	1 053	60,3	0,7
889	64,0	1,7	944	58,4	1,8	999	62,5	- 5,6	1 054	60,6	0,6
890	63,8	1,7	945	58,2	1,5	1 000	61,8	- 5,2	1 055	60,9	0,5
891	63,8	1,8	946	58,1	1,4	1 001	61,1	- 4,4	1 056	61,2	0,4
892	63,7	1,9	947	58,1	1,6	1 002	60,5	- 3,6	1 057	61,5	0,4
893	63,7	2,0	948	58,3	1,6	1 003	59,8	- 2,8	1 058	61,6	0,5
894	63,6	2,0	949	58,3	1,4	1 004	59,2	- 2,0	1 059	61,8	0,6
895	63,5	2,3	950	58,5	1,2	1 005	58,5	- 1,4	1 060	62,0	0,8
896	63,4	2,5	951	58,9	1,2	1 006	57,9	- 0,9	1 061	62,0	1,1
897	63,3	2,3	952	59,3	1,3	1 007	57,1	- 0,5	1 062	61,9	1,3
898	63,2	2,3	953	59,9	1,5	1 008	56,5	- 0,2	1 063	61,8	1,4
899	63,0	2,6	954	60,4	1,6	1 009	56,0	0,2	1 064	61,7	1,3
900	62,9	2,8	955	60,9	1,9	1 010	55,5	0,5	1 065	61,6	1,3
901	63,0	2,3	956	61,4	2,1	1 011	55,3	0,8	1 066	61,7	1,2
902	62,7	1,8	957	61,7	2,1	1 012	55,1	1,1	1 067	61,8	0,7
903	62,5	1,6	958	62,0	2,3	1 013	54,9	1,4	1 068	62,0	0,1

Speed profile and slope time date

Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %	Time in s	speed in km/h	slope in %
1 065	61,6	1,3	1 116	61,0	- 0,9	1 167	55,8	- 1,1	1 218	27,3	- 1,6
1 066	61,7	1,2	1 117	60,3	- 0,6	1 168	55,6	- 1,5	1 219	22,7	- 1,3
1 067	61,8	0,7	1 118	59,7	- 0,3	1 169	55,3	- 1,8	1 220	18,4	- 1,1
1 068	62,0	0,1	1 119	59,2	0,0	1 170	55,2	- 2,0	1 221	14,7	- 0,9
1 069	62,3	- 0,4	1 120	58,9	0,2	1 171	55,1	- 2,2	1 222	11,7	- 0,8
1 070	62,6	- 1,1	1 121	58,8	0,2	1 172	55,0	- 2,4	1 223	9,5	- 0,8
1 071	62,8	- 1,6	1 122	58,8	- 0,1	1 173	55,1	- 2,6	1 224	7,8	- 0,7
1 072	62,9	- 1,5	1 123	58,7	- 0,6	1 174	55,3	- 2,7	1 225	6,3	- 0,7
1 073	62,8	- 1,1	1 124	58,5	- 1,1	1 175	55,5	- 2,9	1 226	5,0	- 0,6
1 074	62,7	- 0,8	1 125	58,3	- 1,7	1 176	55,7	- 2,9	1 227	3,9	- 0,6
1 075	62,2	- 0,4	1 126	58,0	- 2,2	1 177	55,9	- 2,9	1 228	3,1	- 0,6
1 076	61,7	0,0	1 127	57,6	- 2,5	1 178	56,0	- 2,9	1 229	2,3	- 0,6
1 077	61,3	0,3	1 128	56,9	- 2,6	1 179	56,0	- 3,0	1 230	1,6	- 0,6
1 078	61,0	0,5	1 129	55,8	- 2,4	1 180	56,0	- 3,0	1 231	1,1	- 0,5
1 079	60,7	0,8	1 130	54,5	- 2,3	1 181	56,1	- 3,2	1 232	0,8	- 0,5
1 080	60,4	1,0	1 131	52,8	- 2,4	1 182	56,2	- 3,1	1 233	0,5	- 0,5
1 081	60,2	1,3	1 132	50,7	- 2,4	1 183	56,4	- 2,8	1 234	0,4	- 0,5
1 082	60,1	1,6	1 133	48,0	- 2,6	1 184	56,6	- 2,7	1 235	0,3	- 0,5
1 083	60,0	1,9	1 134	44,8	- 2,9	1 185	57,0	- 3,1	1 236	0,2	- 0,5
1 084	60,0	2,1	1 135	41,3	- 2,6	1 186	57,3	- 3,5	1 237	0,1	- 0,5
1 085	60,0	2,1	1 136	37,8	- 1,9	1 187	57,7	- 3,9	1 238	0,1	- 0,5
1 086	60,0	2,0	1 137	34,9	- 1,4	1 188	58,3	- 4,0	1 239	0,1	- 0,5
1 087	60,2	1,8	1 138	32,7	- 1,1	1 189	58,8	- 4,2	1 240	0,0	- 0,5
1 088	60,4	1,6	1 139	31,4	- 0,8	1 190	59,3	- 4,7	1 241	0,0	- 0,5
1 089	60,6	1,5	1 140	30,9	- 0,6	1 191	59,7	- 5,2	1 242	0,0	- 0,5
1 090	60,8	1,4	1 141	31,0	- 0,5	1 192	60,1	- 5,4	1 243	0,0	- 0,5
1 091	61,0	1,4	1 142	31,5	- 0,4	1 193	60,4	- 5,6	1 244	0,0	- 0,5
1 092	61,2	1,4	1 143	32,5	- 0,3	1 194	60,6	- 5,9	1 245	0,0	- 0,5
1 093	61,4	1,3	1 144	33,7	- 0,2	1 195	60,7	- 6,0	1 246	0,0	- 0,5
1 094	61,4	1,1	1 145	35,3	- 0,2	1 196	60,7	- 6,0	1 247	0,0	- 0,5
1 095	61,4	0,9	1 146	37,1	- 0,2	1 197	60,7	- 5,9	1 248	0,0	- 0,5
1 096	61,2	0,7	1 147	39,1	- 0,2	1 198	60,5	- 4,8	1 249	0,0	- 0,5
1 097	61,0	0,5	1 148	41,3	- 0,1	1 199	60,1	- 2,9	1 250	0,0	- 0,5
1 098	60,7	0,3	1 149	43,6	- 0,1	1 200	59,5	- 1,4	1 251	0,0	- 0,5
1 099	60,4	0,2	1 150	45,7	0,0	1 201	58,8	- 0,1	1 252	0,0	- 0,5
1 100	60,4	0,1	1 151	47,6	0,0	1 202	57,9	0,9	1 253	0,0	- 0,5
1 101	60,5	0,0	1 152	49,2	0,0	1 203	56,9	1,6	1 254	0,0	- 0,5
1 102	60,7	0,0	1 153	50,5	0,0	1 204	55,9	2,4	1 255	0,0	- 0,5
1 103	61,0	- 0,1	1 154	51,6	0,1	1 205	54,6	3,1	1 256	0,0	- 0,5
1 104	61,3	- 0,2	1 155	52,7	0,1	1 206	53,4	3,7	1 257	0,0	- 0,5
1 105	61,6	- 0,4	1 156	53,6	0,1	1 207	52,2	4,0	1 258	0,0	- 0,5
1 106	62,0	- 0,7	1 157	54,5	0,1	1 208	51,0	4,1	1 259	0,0	- 0,5
1 107	62,2	- 1,1	1 158	55,2	0,0	1 209	49,7	4,1	1 260	0,0	- 0,5
1 108	62,4	- 1,6	1 159	55,8	0,0	1 210	48,3	4,1	1 261	0,0	- 0,5
1 109	62,5	- 1,9	1 160	56,2	- 0,1	1 211	46,8	3,6	1 262	0,0	- 0,5
1 110	62,6	- 2,2	1 161	56,5	- 0,1	1 212	45,1	2,8	1 263	0,0	- 0,5
1 111	62,7	- 2,5	1 162	56,6	- 0,3	1 213	43,4	2,0	1 264	0,0	- 0,5
1 112	62,7	- 2,8	1 163	56,6	- 0,4	1 214	41,2	1,2			
1 113	62,6	- 2,5	1 164	56,4	- 0,5	1 215	38,7	0,2			
1 114	62,2	- 1,8	1 165	56,2	- 0,6	1 216	35,6	- 0,8			
1 115	61,7	- 1,3	1 166	56,1	- 0,8	1 217	31,7	- 1,7			

Table 2
GPS-time

GPS-time data								
Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
0	49,17750693	9,94045544						
1	49,17750137	9,94042341	46	49,17740985	9,93961042	91	49,17715403	9,92708358
2	49,17749047	9,94043592	47	49,17741914	9,93941719	92	49,17715034	9,92678434
3	49,17748126	9,94044008	48	49,17739967	9,93921967	93	49,17716120	9,92646674
4	49,17748767	9,94041575	49	49,17739145	9,93900211	94	49,17716093	9,92615082
5	49,17748251	9,94043282	50	49,17737345	9,93876394	95	49,17719118	9,92587899
6	49,17749029	9,94042503	51	49,17735852	9,93853608	96	49,17717956	9,92558201
7	49,17749335	9,94041628	52	49,17734312	9,93830573	97	49,17719684	9,92529698
8	49,17749348	9,94040107	53	49,17731937	9,93806294	98	49,17720055	9,92501361
9	49,17749751	9,94041760	54	49,17731364	9,93781048	99	49,17720973	9,92472207
10	49,17748552	9,94045186	55	49,17730943	9,93754921	100	49,17722161	9,92440453
11	49,17747765	9,94045803	56	49,17728668	9,93727866	101	49,17722426	9,92411846
12	49,17748683	9,94044064	57	49,17727120	9,93700407	102	49,17722279	9,92383264
13	49,17748199	9,94041943	58	49,17726191	9,93673182	103	49,17724753	9,92356613
14	49,17748296	9,94041118	59	49,17726419	9,93644801	104	49,17724873	9,92328974
15	49,17748854	9,94040632	60	49,17724683	9,93616792	105	49,17728966	9,92298281
16	49,17747063	9,94041231	61	49,17722599	9,93587547	106	49,17729082	9,92269771
17	49,17747577	9,94042190	62	49,17722515	9,93557748	107	49,17731112	9,92241876
18	49,17747655	9,94044846	63	49,17719760	9,93529450	108	49,17732411	9,92214881
19	49,17748326	9,94044092	64	49,17720197	9,93500446	109	49,17732270	9,92186338
20	49,17748233	9,94044194	65	49,17720112	9,93471327	110	49,17734203	9,92157757
21	49,17747505	9,94044510	66	49,17718985	9,93441697	111	49,17734548	9,92128924
22	49,17748198	9,94042680	67	49,17718511	9,93411791	112	49,17732703	9,92101924
23	49,17747088	9,94042069	68	49,17718032	9,93382102	113	49,17735183	9,92073668
24	49,17747111	9,94042548	69	49,17717223	9,93352428	114	49,17740044	9,92045308
25	49,17746717	9,94045668	70	49,17716877	9,93321666	115	49,17738919	9,92017575
26	49,17747914	9,94045445	71	49,17715935	9,93293197	116	49,17740460	9,91988895
27	49,17747197	9,94043996	72	49,17715123	9,93266362	117	49,17744662	9,91961440
28	49,17747035	9,94042438	73	49,17715162	9,93234099	118	49,17745760	9,91930702
29	49,17747819	9,94044783	74	49,17715081	9,93203479	119	49,17744447	9,91901365
30	49,17747888	9,94045560	75	49,17714905	9,93175589	120	49,17744758	9,91870949
31	49,17747192	9,94045575	76	49,17715444	9,93147779	121	49,17747833	9,91841378
32	49,17747403	9,94046187	77	49,17715670	9,93118972	122	49,17753087	9,91810365
33	49,17746330	9,94044822	78	49,17712625	9,93089947	123	49,17751780	9,91780871
34	49,17747468	9,94046943	79	49,17711304	9,93060915	124	49,17751519	9,91750121
35	49,17746721	9,94046651	80	49,17712630	9,93031037	125	49,17754354	9,91721015
36	49,17746984	9,94046203	81	49,17713088	9,93003269	126	49,17757729	9,91690128
37	49,17748706	9,94042981	82	49,17714726	9,92973485	127	49,17757228	9,91660068
38	49,17749012	9,94038666	83	49,17714299	9,92943909	128	49,17758391	9,91628079
39	49,17746103	9,94036862	84	49,17716135	9,92912712	129	49,17758020	9,91598819
40	49,17745826	9,94032161	85	49,17715855	9,92882577	130	49,17759987	9,91565305
41	49,17745588	9,94024460	86	49,17715228	9,92853433	131	49,17761970	9,91535841
42	49,17744570	9,94016553	87	49,17714458	9,92824141	132	49,17765718	9,91505740
43	49,17743160	9,94007622	88	49,17714385	9,92794897	133	49,17767191	9,91473407
44	49,17742924	9,93992814	89	49,17715334	9,92766471	134	49,17767871	9,91443628
45	49,17741497	9,93977911	90	49,17715927	9,92736719	135	49,17769355	9,91411627

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
136	49,17770220	9,91382304	186	49,17763466	9,89840963	236	49,17606849	9,88269057
137	49,17770798	9,91353583	187	49,17760614	9,89811395	237	49,17601532	9,88240077
138	49,17772229	9,91323129	188	49,17756734	9,89782615	238	49,17597985	9,88206657
139	49,17773009	9,91292178	189	49,17757374	9,89752028	239	49,17593784	9,88174472
140	49,17772809	9,91263774	190	49,17753771	9,89722077	240	49,17589380	9,88143276
141	49,17772051	9,91232464	191	49,17753511	9,89690286	241	49,17586890	9,88112185
142	49,17773296	9,91200855	192	49,17750506	9,89659580	242	49,17583069	9,88080190
143	49,17775514	9,91175606	193	49,17749751	9,89628693	243	49,17578712	9,88050773
144	49,17777123	9,91145220	194	49,17747503	9,89597069	244	49,17575001	9,88018870
145	49,17779376	9,91115258	195	49,17743045	9,89566393	245	49,17568914	9,87989925
146	49,17781647	9,91083718	196	49,17741828	9,89534641	246	49,17566347	9,87958434
147	49,17780864	9,91054227	197	49,17739099	9,89503775	247	49,17562902	9,87926547
148	49,17781774	9,91024920	198	49,17737114	9,89471732	248	49,17557931	9,87894738
149	49,17783202	9,90993314	199	49,17735909	9,89437392	249	49,17553943	9,87861883
150	49,17785376	9,90960940	200	49,17733512	9,89407151	250	49,17550641	9,87830890
151	49,17785277	9,90932308	201	49,17733502	9,89370101	251	49,17547757	9,87798913
152	49,17784906	9,90903802	202	49,17728044	9,89342555	252	49,17542733	9,87765637
153	49,17785555	9,90872892	203	49,17724933	9,89310519	253	49,17539428	9,87733484
154	49,17785153	9,90839976	204	49,17719558	9,89282502	254	49,17537335	9,87699815
155	49,17786329	9,90806697	205	49,17714909	9,89250431	255	49,17534891	9,87669374
156	49,17786238	9,90775413	206	49,17712573	9,89216689	256	49,17529647	9,87639385
157	49,17786354	9,90743755	207	49,17710298	9,89183106	257	49,17524710	9,87608129
158	49,17785836	9,90714738	208	49,17707560	9,89151586	258	49,17522071	9,87577951
159	49,17784779	9,90683013	209	49,17706968	9,89118370	259	49,17519821	9,87543641
160	49,17784193	9,90651429	210	49,17702995	9,89086920	260	49,17515054	9,87516624
161	49,17786848	9,90620301	211	49,17699469	9,89055197	261	49,17510887	9,87487696
162	49,17785957	9,90589698	212	49,17698344	9,89024297	262	49,17508754	9,87455475
163	49,17782604	9,90558582	213	49,17692524	9,88994600	263	49,17506312	9,87423020
164	49,17785640	9,90525942	214	49,17689188	9,88962397	264	49,17502857	9,87389848
165	49,17786883	9,90493654	215	49,17687274	9,88930560	265	49,17501893	9,87360599
166	49,17784926	9,90461252	216	49,17684014	9,88899008	266	49,17500054	9,87328933
167	49,17782864	9,90430886	217	49,17680700	9,88865790	267	49,17496051	9,87297281
168	49,17783708	9,90400147	218	49,17678064	9,88832364	268	49,17492702	9,87268292
169	49,17782432	9,90368566	219	49,17675307	9,88799709	269	49,17489787	9,87238950
170	49,17779227	9,90337560	220	49,17669565	9,88770722	270	49,17486293	9,87207996
171	49,17780558	9,90305647	221	49,17666251	9,88739329	271	49,17484369	9,87176559
172	49,17779334	9,90273646	222	49,17662351	9,88707697	272	49,17482457	9,87146198
173	49,17778143	9,90242724	223	49,17657201	9,88675438	273	49,17479266	9,87115279
174	49,17778308	9,90211614	224	49,17655123	9,88641642	274	49,17477879	9,87083585
175	49,17774757	9,90182139	225	49,17650612	9,88611773	275	49,17475205	9,87052156
176	49,17775892	9,90151403	226	49,17646671	9,88581197	276	49,17472075	9,87018121
177	49,17774253	9,90120252	227	49,17643340	9,88550439	277	49,17471784	9,86990399
178	49,17773300	9,90090088	228	49,17640666	9,88516647	278	49,17469242	9,86958317
179	49,17773319	9,90059894	229	49,17636383	9,88485801	279	49,17466012	9,86928347
180	49,17769164	9,90029252	230	49,17631202	9,88455441	280	49,17465549	9,86897774
181	49,17770462	9,89997597	231	49,17625438	9,88426459	281	49,17462660	9,86868188
182	49,17766803	9,89966351	232	49,17622604	9,88392837	282	49,17462313	9,86836819
183	49,17768431	9,89934391	233	49,17617257	9,88363179	283	49,17460719	9,86804689
184	49,17765519	9,89903767	234	49,17614341	9,88331314	284	49,17459439	9,86774685
185	49,17765936	9,89872324	235	49,17610363	9,88299134	285	49,17457737	9,86743556

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
286	49,17456653	9,86715293	336	49,17449167	9,86482816	386	49,16886157	9,86026300
287	49,17455231	9,86684848	337	49,17440211	9,86479291	387	49,16878885	9,86019968
288	49,17453606	9,86656179	338	49,17430738	9,86475112	388	49,16879410	9,86011761
289	49,17453224	9,86627375	339	49,17421783	9,86470788	389	49,16875917	9,86002899
290	49,17451231	9,86598773	340	49,17411423	9,86467930	390	49,16874892	9,85991465
291	49,17450935	9,86568758	341	49,17399051	9,86463636	391	49,16875290	9,85979488
292	49,17449326	9,86543041	342	49,17388673	9,86460068	392	49,16873569	9,85968285
293	49,17448909	9,86516175	343	49,17377482	9,86451752	393	49,16873308	9,85955354
294	49,17448896	9,86482997	344	49,17365865	9,86446442	394	49,16872912	9,85939520
295	49,17450897	9,86453465	345	49,17355034	9,86441598	395	49,16871180	9,85921769
296	49,17447516	9,86430947	346	49,17343380	9,86431803	396	49,16868834	9,85905238
297	49,17447109	9,86408498	347	49,17332507	9,86422279	397	49,16866891	9,85886170
298	49,17446527	9,86385837	348	49,17320043	9,86417377	398	49,16866929	9,85867376
299	49,17448335	9,86363449	349	49,17309203	9,86407256	399	49,16864018	9,85847207
300	49,17448440	9,86344987	350	49,17298024	9,86398297	400	49,16863059	9,85827859
301	49,17448275	9,86324659	351	49,17284599	9,86391441	401	49,16863235	9,85808670
302	49,17449062	9,86309674	352	49,17273377	9,86382134	402	49,16863169	9,85789010
303	49,17452489	9,86295387	353	49,17261849	9,86370119	403	49,16862201	9,85770388
304	49,17460500	9,86281740	354	49,17250336	9,86357825	404	49,16861694	9,85748170
305	49,17469104	9,86269630	355	49,17238497	9,86345251	405	49,16861188	9,85726584
306	49,17478559	9,86265433	356	49,17227924	9,86330336	406	49,16861466	9,85710191
307	49,17485267	9,86263065	357	49,17216698	9,86315405	407	49,16860962	9,85688353
308	49,17495477	9,86263385	358	49,17205822	9,86301873	408	49,16862336	9,85666270
309	49,17508068	9,86271800	359	49,17194130	9,86286173	409	49,16863447	9,85645624
310	49,17516175	9,86280613	360	49,17183097	9,86270711	410	49,16863995	9,85627032
311	49,17523815	9,86294521	361	49,17172348	9,86255712	411	49,16864039	9,85608583
312	49,17526923	9,86308616	362	49,17163148	9,86239879	412	49,16869785	9,85582917
313	49,17529063	9,86328040	363	49,17153161	9,86224564	413	49,16871843	9,85562118
314	49,17527156	9,86345837	364	49,17141279	9,86208087	414	49,16876498	9,85541007
315	49,17527004	9,86358749	365	49,17130519	9,86193026	415	49,16880238	9,85521712
316	49,17522552	9,86376544	366	49,17120122	9,86177430	416	49,16882523	9,85505807
317	49,17520997	9,86391095	367	49,17109484	9,86160068	417	49,16885602	9,85487158
318	49,17518353	9,86408837	368	49,17099488	9,86144393	418	49,16889165	9,85469456
319	49,17515910	9,86426268	369	49,17087877	9,86128334	419	49,16893450	9,85452033
320	49,17513360	9,86443189	370	49,17075017	9,86114274	420	49,16896700	9,85432944
321	49,17513063	9,86459029	371	49,17064887	9,86101768	421	49,16897709	9,85413410
322	49,17511119	9,86474056	372	49,17051115	9,86090356	422	49,16902381	9,85394413
323	49,17510005	9,86483104	373	49,17037850	9,86080188	423	49,16906957	9,85375937
324	49,17508965	9,86489406	374	49,17025161	9,86069139	424	49,16912109	9,85357268
325	49,17506005	9,86493794	375	49,17009240	9,86062875	425	49,16915785	9,85340269
326	49,17503016	9,86497031	376	49,16996934	9,86050848	426	49,16918298	9,85322646
327	49,17501372	9,86499209	377	49,16983175	9,86044716	427	49,16920528	9,85306232
328	49,17498884	9,86502721	378	49,16968763	9,86038283	428	49,16925049	9,85288104
329	49,17493767	9,86502675	379	49,16950211	9,86034491	429	49,16922639	9,85273174
330	49,17490221	9,86502005	380	49,16940965	9,86030346	430	49,16922348	9,85256422
331	49,17482139	9,86496004	381	49,16928120	9,86029155	431	49,16922232	9,85237817
332	49,17475856	9,86494331	382	49,16917601	9,86030196	432	49,16922472	9,85219980
333	49,17468855	9,86491108	383	49,16908931	9,86032257	433	49,16923497	9,85198087
334	49,17462903	9,86488047	384	49,16898727	9,86031305	434	49,16920807	9,85182583
335	49,17456288	9,86486585	385	49,16891963	9,86028593	435	49,16917409	9,85167353

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
436	49,16913670	9,85150781	486	49,16714651	9,84287952	536	49,16578853	9,83322318
437	49,16907601	9,85138579	487	49,16712978	9,84270975	537	49,16571813	9,83302695
438	49,16905440	9,85116333	488	49,16712863	9,84250778	538	49,16564659	9,83279880
439	49,16899292	9,85098993	489	49,16712781	9,84232371	539	49,16554842	9,83259093
440	49,16893925	9,85081124	490	49,16712538	9,84210237	540	49,16544927	9,83241820
441	49,16887780	9,85065456	491	49,16711905	9,84188284	541	49,16538284	9,83221054
442	49,16882284	9,85049064	492	49,16710803	9,84171704	542	49,16527879	9,83201980
443	49,16877128	9,85032181	493	49,16710773	9,84155380	543	49,16518731	9,83183633
444	49,16872108	9,85014484	494	49,16711135	9,84135694	544	49,16511154	9,83165506
445	49,16866533	9,84999950	495	49,16709304	9,84116539	545	49,16504520	9,83144387
446	49,16861645	9,84982073	496	49,16706962	9,84095397	546	49,16496469	9,83122488
447	49,16855509	9,84965038	497	49,16704233	9,84076239	547	49,16490491	9,83104141
448	49,16850746	9,84947389	498	49,16701984	9,84057958	548	49,16485828	9,83081258
449	49,16846082	9,84929509	499	49,16698227	9,84041400	549	49,16479845	9,83055884
450	49,16841442	9,84912912	500	49,16694479	9,84020507	550	49,16475726	9,83035095
451	49,16836347	9,84894810	501	49,16691704	9,84001762	551	49,16473615	9,83015793
452	49,16831401	9,84878454	502	49,16688782	9,83980563	552	49,16471861	9,82997789
453	49,16825866	9,84861115	503	49,16686143	9,83962545	553	49,16468452	9,82979167
454	49,16820216	9,84848659	504	49,16683973	9,83941007	554	49,16465967	9,82961380
455	49,16815478	9,84828658	505	49,16680721	9,83919010	555	49,16463542	9,82945314
456	49,16807754	9,84815572	506	49,16680861	9,83902005	556	49,16457148	9,82930402
457	49,16804545	9,84796617	507	49,16678472	9,83885499	557	49,16455325	9,82912337
458	49,16800542	9,84782062	508	49,16678064	9,83867727	558	49,16446730	9,82893889
459	49,16795128	9,84763824	509	49,16675612	9,83848252	559	49,16436606	9,82873187
460	49,16789625	9,84748872	510	49,16674703	9,83829800	560	49,16426622	9,82862332
461	49,16786663	9,84730300	511	49,16674260	9,83811885	561	49,16415336	9,82852398
462	49,16781765	9,84713164	512	49,16673297	9,83793092	562	49,16404172	9,82843314
463	49,16775595	9,84695314	513	49,16672134	9,83774555	563	49,16392621	9,82838708
464	49,16768635	9,84679718	514	49,16670106	9,83755617	564	49,16379849	9,82831100
465	49,16765532	9,84664021	515	49,16668030	9,83737442	565	49,16368342	9,82826316
466	49,16762960	9,84645040	516	49,16666730	9,83719094	566	49,16356050	9,82821290
467	49,16758912	9,84625370	517	49,16664753	9,83697087	567	49,16344022	9,82815755
468	49,16752450	9,84607192	518	49,16663122	9,83676733	568	49,16330395	9,82812133
469	49,16745605	9,84590738	519	49,16661682	9,83658039	569	49,16314820	9,82807433
470	49,16739595	9,84580305	520	49,16659182	9,83640231	570	49,16306375	9,82813122
471	49,16733000	9,84561087	521	49,16657799	9,83618486	571	49,16291497	9,82814778
472	49,16726829	9,84542861	522	49,16656311	9,83599244	572	49,16281950	9,82828429
473	49,16723530	9,84535391	523	49,16654843	9,83578003	573	49,16267505	9,82830547
474	49,16719666	9,84520276	524	49,16651642	9,83561068	574	49,16256041	9,82834957
475	49,16716180	9,84499116	525	49,16646604	9,83540908	575	49,16242397	9,82843586
476	49,16715372	9,84479222	526	49,16641327	9,83521649	576	49,16230121	9,82851628
477	49,16713247	9,84457807	527	49,16635410	9,83502301	577	49,16217909	9,82859133
478	49,16712749	9,84441509	528	49,16629969	9,83484918	578	49,16203228	9,82868588
479	49,16709514	9,84424773	529	49,16623827	9,83467252	579	49,16191336	9,82881382
480	49,16709685	9,84407318	530	49,16618855	9,83447308	580	49,16178177	9,82889413
481	49,16705186	9,84389129	531	49,16611836	9,83428804	581	49,16166503	9,82894316
482	49,16707340	9,84368191	532	49,16605023	9,83408063	582	49,16153387	9,82902048
483	49,16707987	9,84347033	533	49,16599418	9,83386758	583	49,16141214	9,82909642
484	49,16711478	9,84326833	534	49,16591846	9,83363936	584	49,16129874	9,82913304
485	49,16710793	9,84306411	535	49,16585322	9,83343539	585	49,16119706	9,82921610

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
586	49,16108715	9,82926968	636	49,16163310	9,82690054	686	49,16078618	9,82225875
587	49,16100072	9,82937665	637	49,16148575	9,82694117	687	49,16077804	9,82206777
588	49,16090649	9,82954138	638	49,16136431	9,82696900	688	49,16074789	9,82189395
589	49,16080267	9,82958778	639	49,16123454	9,82700222	689	49,16069323	9,82174500
590	49,16070572	9,82970590	640	49,16110784	9,82703667	690	49,16063537	9,82159652
591	49,16063276	9,82980187	641	49,16098626	9,82708572	691	49,16059538	9,82147516
592	49,16054700	9,82994029	642	49,16087386	9,82712075	692	49,16058045	9,82132384
593	49,16044466	9,82999980	643	49,16075552	9,82715767	693	49,16056326	9,82115891
594	49,16033869	9,82999760	644	49,16064017	9,82721940	694	49,16055299	9,82101790
595	49,16026486	9,82993307	645	49,16052535	9,82728779	695	49,16054924	9,82084143
596	49,16023800	9,82981968	646	49,16039005	9,82734532	696	49,16056917	9,82068286
597	49,16027202	9,82969469	647	49,16027738	9,82739701	697	49,16061103	9,82051442
598	49,16035608	9,82961780	648	49,16017092	9,82742871	698	49,16065104	9,82040331
599	49,16046609	9,82954478	649	49,16010401	9,82741573	699	49,16068162	9,82023313
600	49,16053602	9,82946659	650	49,16001991	9,82737601	700	49,16071865	9,82006154
601	49,16057594	9,82937736	651	49,15992405	9,82728779	701	49,16078013	9,81990530
602	49,16063293	9,82927870	652	49,15986044	9,82715900	702	49,16084828	9,81972452
603	49,16073357	9,82921625	653	49,15982589	9,82704861	703	49,16085936	9,81952523
604	49,16082327	9,82912717	654	49,15983598	9,82692120	704	49,16083368	9,81933356
605	49,16088989	9,82900037	655	49,15988749	9,82682108	705	49,16078012	9,81912416
606	49,16101255	9,82886401	656	49,15993273	9,82668975	706	49,16073449	9,81891852
607	49,16110647	9,82876987	657	49,16001756	9,82655933	707	49,16065145	9,81881213
608	49,16116944	9,82861156	658	49,16010590	9,82643932	708	49,16056364	9,81871403
609	49,16126168	9,82846586	659	49,16018971	9,82630065	709	49,16045984	9,81863487
610	49,16134956	9,82836930	660	49,16027931	9,82617704	710	49,16034483	9,81859399
611	49,16142362	9,82826734	661	49,16038479	9,82604483	711	49,16018124	9,81858825
612	49,16151792	9,82815035	662	49,16049214	9,82592600	712	49,16007498	9,81854520
613	49,16162418	9,82801518	663	49,16060293	9,82580789	713	49,15997490	9,81843469
614	49,16172724	9,82788680	664	49,16068121	9,82567699	714	49,15993263	9,81831798
615	49,16182766	9,82776747	665	49,16077681	9,82555027	715	49,15993297	9,81813467
616	49,16193227	9,82767048	666	49,16085502	9,82541694	716	49,15987597	9,81797376
617	49,16204361	9,82757181	667	49,16093922	9,82531638	717	49,15984001	9,81780844
618	49,16213712	9,82749044	668	49,16103315	9,82516825	718	49,15984409	9,81767348
619	49,16222340	9,82739985	669	49,16108630	9,82505980	719	49,15984111	9,81752007
620	49,16234964	9,82728773	670	49,16116572	9,82495549	720	49,15981139	9,81734764
621	49,16244109	9,82719929	671	49,16119569	9,82476678	721	49,15980543	9,81717240
622	49,16247870	9,82710278	672	49,16123848	9,82457687	722	49,15986389	9,81696011
623	49,16255592	9,82701914	673	49,16125097	9,82440435	723	49,15985215	9,81676893
624	49,16260272	9,82691216	674	49,16122817	9,82424711	724	49,15983685	9,81650591
625	49,16261998	9,82679623	675	49,16117034	9,82405977	725	49,15986503	9,81631037
626	49,16259455	9,82668794	676	49,16117796	9,82389133	726	49,15988102	9,81611586
627	49,16252072	9,82660954	677	49,16114749	9,82372775	727	49,15990180	9,81588586
628	49,16241609	9,82665587	678	49,16113337	9,82355591	728	49,15991361	9,81567563
629	49,16232904	9,82668023	679	49,16109714	9,82339249	729	49,15988793	9,81542823
630	49,16223117	9,82673755	680	49,16105573	9,82322367	730	49,15993437	9,81524912
631	49,16214890	9,82678414	681	49,16102483	9,82306636	731	49,15995698	9,81506135
632	49,16204915	9,82680387	682	49,16098183	9,82289765	732	49,15996467	9,81486182
633	49,16194163	9,82681387	683	49,16092080	9,82272831	733	49,15996062	9,81465223
634	49,16185513	9,82682904	684	49,16082075	9,82260179	734	49,15998342	9,81439413
635	49,16174542	9,82685917	685	49,16079211	9,82245045	735	49,16000517	9,81414756

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
736	49,16001091	9,81397266	786	49,15889235	9,80395430	836	49,15880538	9,79999743
737	49,16000624	9,81376767	787	49,15888483	9,80372033	837	49,15876047	9,80013726
738	49,16000883	9,81357017	788	49,15891203	9,80353066	838	49,15866022	9,80026604
739	49,15998865	9,81335609	789	49,15889410	9,80328344	839	49,15860266	9,80040405
740	49,16002252	9,81308827	790	49,15892791	9,80304903	840	49,15850799	9,80058157
741	49,16001443	9,81281535	791	49,15893208	9,80290042	841	49,15847422	9,80074974
742	49,16007077	9,81259880	792	49,15892798	9,80263714	842	49,15843538	9,80093266
743	49,16005241	9,81239035	793	49,15892080	9,80244081	843	49,15838704	9,80111342
744	49,16002382	9,81214118	794	49,15901494	9,80228685	844	49,15831921	9,80130395
745	49,16006491	9,81193847	795	49,15901279	9,80198462	845	49,15830706	9,80142278
746	49,16010995	9,81176532	796	49,15902749	9,80183222	846	49,15826619	9,80163086
747	49,16007938	9,81158626	797	49,15908521	9,80159606	847	49,15820256	9,80179096
748	49,16010353	9,81138233	798	49,15907570	9,80139214	848	49,15815628	9,80199365
749	49,16013304	9,81114039	799	49,15908693	9,80120555	849	49,15809132	9,80221982
750	49,16014668	9,81096466	800	49,15907309	9,80099253	850	49,15804624	9,80240513
751	49,16016654	9,81075701	801	49,15913853	9,80078751	851	49,15797528	9,80259997
752	49,16017306	9,81054530	802	49,15915096	9,80058267	852	49,15795017	9,80282428
753	49,16016105	9,81030110	803	49,15921063	9,80034168	853	49,15788582	9,80301907
754	49,16019067	9,81003670	804	49,15929407	9,80010402	854	49,15778665	9,80323277
755	49,16017426	9,80988701	805	49,15936562	9,79991194	855	49,15776007	9,80339990
756	49,16019082	9,80965856	806	49,15942671	9,79973389	856	49,15769134	9,80361024
757	49,16017510	9,80945305	807	49,15948893	9,79957452	857	49,15763951	9,80376380
758	49,16016501	9,80927793	808	49,15958623	9,79941016	858	49,15759096	9,80394150
759	49,16014294	9,80910551	809	49,15966726	9,79927957	859	49,15748750	9,80406925
760	49,16009019	9,80886368	810	49,15975042	9,79915622	860	49,15739325	9,80421540
761	49,16002462	9,80870257	811	49,15988691	9,79898470	861	49,15725139	9,80437556
762	49,15996076	9,80860780	812	49,15996518	9,79888062	862	49,15712719	9,80444561
763	49,15989327	9,80840332	813	49,15999088	9,79875377	863	49,15697249	9,80453077
764	49,15981635	9,80825024	814	49,16010128	9,79863001	864	49,15684298	9,80451272
765	49,15973288	9,80810221	815	49,16007195	9,79851126	865	49,15671386	9,80449498
766	49,15965231	9,80794990	816	49,16009935	9,79836896	866	49,15663649	9,80442450
767	49,15957457	9,80777895	817	49,16004444	9,79822797	867	49,15648780	9,80437557
768	49,15950744	9,80760854	818	49,16004189	9,79817097	868	49,15639976	9,80425918
769	49,15940868	9,80741790	819	49,15997194	9,79819216	869	49,15630712	9,80413312
770	49,15933680	9,80723174	820	49,15988174	9,79825830	870	49,15619925	9,80401618
771	49,15926440	9,80706226	821	49,15983095	9,79833469	871	49,15608856	9,80387885
772	49,15923684	9,80688962	822	49,15980989	9,79844840	872	49,15597923	9,80373178
773	49,15917686	9,80666590	823	49,15977664	9,79853184	873	49,15584632	9,80357172
774	49,15901857	9,80647610	824	49,15970831	9,79864850	874	49,15574722	9,80345064
775	49,15897225	9,80630042	825	49,15971518	9,79873666	875	49,15563970	9,80334071
776	49,15893267	9,80611388	826	49,15960258	9,79881699	876	49,15553534	9,80318860
777	49,15891360	9,80593209	827	49,15950355	9,79895077	877	49,15542448	9,80303909
778	49,15889101	9,80576254	828	49,15946054	9,79900836	878	49,15531197	9,80288448
779	49,15888996	9,80557445	829	49,15942943	9,79914572	879	49,15518543	9,80276276
780	49,15888890	9,80538688	830	49,15936768	9,79924512	880	49,15502524	9,80267131
781	49,15887936	9,80514258	831	49,15920779	9,79938879	881	49,15488409	9,80257433
782	49,15887925	9,80489955	832	49,15914458	9,79953056	882	49,15475553	9,80244595
783	49,15888334	9,80466966	833	49,15902990	9,79968915	883	49,15460679	9,80234882
784	49,15889717	9,80444567	834	49,15897666	9,79980982	884	49,15446151	9,80225686
785	49,15888132	9,80422148	835	49,15893466	9,79989072	885	49,15431167	9,80217492

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
886	49,15416051	9,80207547	936	49,14739277	9,79592122	986	49,14069867	9,79067353
887	49,15400329	9,80198253	937	49,14727134	9,79576793	987	49,14058457	9,79050159
888	49,15384633	9,80191569	938	49,14715461	9,79561835	988	49,14047664	9,79033696
889	49,15369548	9,80181231	939	49,14704164	9,79547943	989	49,14037102	9,79014784
890	49,15355403	9,80171113	940	49,14692624	9,79532302	990	49,14027100	9,78997326
891	49,15341867	9,80158360	941	49,14681370	9,79520846	991	49,14016755	9,78976319
892	49,15327366	9,80149831	942	49,14669237	9,79509514	992	49,14005683	9,78959916
893	49,15313355	9,80140075	943	49,14657026	9,79492047	993	49,13993496	9,78944559
894	49,15297774	9,80131481	944	49,14646237	9,79477946	994	49,13981024	9,78924031
895	49,15284102	9,80123068	945	49,14634783	9,79464632	995	49,13969615	9,78903905
896	49,15269889	9,80111477	946	49,14621084	9,79458685	996	49,13957097	9,78890369
897	49,15255940	9,80099412	947	49,14608846	9,79450767	997	49,13944394	9,78876253
898	49,15240479	9,80090633	948	49,14594864	9,79442329	998	49,13933707	9,78858813
899	49,15226208	9,80081866	949	49,14578859	9,79436820	999	49,13923221	9,78843597
900	49,15211781	9,80073055	950	49,14565079	9,79430603	1 000	49,13911965	9,78826620
901	49,15197097	9,80061865	951	49,14550647	9,79429263	1 001	49,13900568	9,78811205
902	49,15181647	9,80053530	952	49,14535692	9,79426412	1 002	49,13889765	9,78792956
903	49,15167447	9,80044699	953	49,14521167	9,79422085	1 003	49,13879358	9,78779233
904	49,15154122	9,80034774	954	49,14506332	9,79419256	1 004	49,13868071	9,78765019
905	49,15140012	9,80027059	955	49,14490364	9,79412137	1 005	49,13858133	9,78751575
906	49,15126524	9,80017992	956	49,14476562	9,79402943	1 006	49,13848444	9,78733203
907	49,15112372	9,80006796	957	49,14462013	9,79392897	1 007	49,13838542	9,78716892
908	49,15098139	9,79994744	958	49,14444774	9,79389670	1 008	49,13830327	9,78699851
909	49,15084288	9,79985266	959	49,14431509	9,79383856	1 009	49,13821523	9,78683164
910	49,15071325	9,79973162	960	49,14418329	9,79371430	1 010	49,13813325	9,78665890
911	49,15058270	9,79962510	961	49,14404929	9,79359055	1 011	49,13806409	9,78646975
912	49,15049521	9,79943892	962	49,14390140	9,79350060	1 012	49,13799294	9,78630874
913	49,15033072	9,79934318	963	49,14374823	9,79341946	1 013	49,13794592	9,78610305
914	49,15022187	9,79920696	964	49,14360609	9,79332798	1 014	49,13786247	9,78595821
915	49,15011020	9,79905651	965	49,14345730	9,79322816	1 015	49,13779162	9,78578168
916	49,14997848	9,79894386	966	49,14331223	9,79314529	1 016	49,13773120	9,78558678
917	49,14986308	9,79887896	967	49,14316821	9,79304038	1 017	49,13766729	9,78542840
918	49,14973958	9,79863813	968	49,14302358	9,79296335	1 018	49,13753490	9,78530349
919	49,14957856	9,79852168	969	49,14288294	9,79284544	1 019	49,13750822	9,78509129
920	49,14946386	9,79831519	970	49,14273802	9,79273495	1 020	49,13745048	9,78489396
921	49,14929634	9,79819251	971	49,14259532	9,79265354	1 021	49,13738150	9,78472130
922	49,14915780	9,79804291	972	49,14244682	9,79256477	1 022	49,13730510	9,78457656
923	49,14902881	9,79790346	973	49,14230576	9,79243922	1 023	49,13724278	9,78443237
924	49,14886535	9,79778697	974	49,14215993	9,79235057	1 024	49,13717175	9,78421342
925	49,14873969	9,79764236	975	49,14202224	9,79225479	1 025	49,13709489	9,78403554
926	49,14863131	9,79747193	976	49,14192649	9,79207875	1 026	49,13703931	9,78381689
927	49,14849819	9,79734100	977	49,14179972	9,79196309	1 027	49,13700140	9,78361478
928	49,14836865	9,79718509	978	49,14164716	9,79187998	1 028	49,13694153	9,78337882
929	49,14823382	9,79702370	979	49,14152337	9,79174599	1 029	49,13689822	9,78315904
930	49,14811531	9,79685269	980	49,14140709	9,79160647	1 030	49,13684555	9,78293961
931	49,14799061	9,79668487	981	49,14128665	9,79146198	1 031	49,13679294	9,78270381
932	49,14787336	9,79652353	982	49,14116828	9,79130841	1 032	49,13674928	9,78247440
933	49,14775410	9,79636795	983	49,14103037	9,79113242	1 033	49,13669183	9,78226990
934	49,14762272	9,79622230	984	49,14092155	9,79097025	1 034	49,13663800	9,78202566
935	49,14751243	9,79608272	985	49,14080800	9,79082664	1 035	49,13658052	9,78180074

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
1 036	49,13652359	9,78158813	1 086	49,13237913	9,77186124	1 136	49,12720202	9,76415611
1 037	49,13647947	9,78135692	1 087	49,13227624	9,77168292	1 137	49,12717431	9,76405517
1 038	49,13643193	9,78113757	1 088	49,13218045	9,77151153	1 138	49,12715310	9,76400894
1 039	49,13636008	9,78091356	1 089	49,13208228	9,77133325	1 139	49,12714505	9,76394355
1 040	49,13629968	9,78069485	1 090	49,13198790	9,77115243	1 140	49,12713606	9,76381917
1 041	49,13621995	9,78050998	1 091	49,13189183	9,77097281	1 141	49,12710891	9,76368810
1 042	49,13613128	9,78033386	1 092	49,13178720	9,77077683	1 142	49,12705169	9,76358603
1 043	49,13602818	9,78015563	1 093	49,13169570	9,77058490	1 143	49,12696985	9,76355563
1 044	49,13593536	9,77996641	1 094	49,13159339	9,77041845	1 144	49,12687853	9,76351535
1 045	49,13583280	9,77978002	1 095	49,13149268	9,77024202	1 145	49,12681082	9,76339414
1 046	49,13574731	9,77960036	1 096	49,13138599	9,77007172	1 146	49,12677317	9,76327472
1 047	49,13564847	9,77942682	1 097	49,13129115	9,76989711	1 147	49,12670209	9,76316134
1 048	49,13555817	9,77926100	1 098	49,13120155	9,76972372	1 148	49,12663933	9,76307381
1 049	49,13547452	9,77908658	1 099	49,13111122	9,76956212	1 149	49,12657362	9,76294058
1 050	49,13539362	9,77890582	1 100	49,13101670	9,76937624	1 150	49,12649802	9,76279694
1 051	49,13531475	9,77871068	1 101	49,13090207	9,76920756	1 151	49,12642993	9,76263027
1 052	49,13523905	9,77850565	1 102	49,13079375	9,76903183	1 152	49,12634734	9,76246702
1 053	49,13517694	9,77829862	1 103	49,13068759	9,76888584	1 153	49,12627563	9,76230542
1 054	49,13510990	9,77809244	1 104	49,13056436	9,76875534	1 154	49,12620135	9,76213046
1 055	49,13503504	9,77789148	1 105	49,13042806	9,76864412	1 155	49,12611796	9,76197678
1 056	49,13497000	9,77765499	1 106	49,13029815	9,76851974	1 156	49,12603907	9,76180560
1 057	49,13488720	9,77748434	1 107	49,13013759	9,76844733	1 157	49,12595415	9,76163320
1 058	49,13482504	9,77725539	1 108	49,13002645	9,76826645	1 158	49,12586651	9,76146722
1 059	49,13475156	9,77703190	1 109	49,12988229	9,76813832	1 159	49,12578485	9,76129232
1 060	49,13466991	9,77685150	1 110	49,12973357	9,76802424	1 160	49,12569323	9,76111964
1 061	49,13459520	9,77664974	1 111	49,12959049	9,76792029	1 161	49,12561198	9,76094173
1 062	49,13452200	9,77643674	1 112	49,12944065	9,76781473	1 162	49,12551523	9,76077996
1 063	49,13444370	9,77620129	1 113	49,12931015	9,76769953	1 163	49,12542455	9,76061364
1 064	49,13436178	9,77601753	1 114	49,12918471	9,76756392	1 164	49,12534291	9,76045175
1 065	49,13428168	9,77580349	1 115	49,12905110	9,76743174	1 165	49,12525486	9,76026965
1 066	49,13421430	9,77560027	1 116	49,12894839	9,76725925	1 166	49,12516897	9,76010355
1 067	49,13414580	9,77540292	1 117	49,12878289	9,76718948	1 167	49,12507717	9,75991681
1 068	49,13406986	9,77519907	1 118	49,12864582	9,76709963	1 168	49,12498352	9,75974392
1 069	49,13399055	9,77499504	1 119	49,12853180	9,76696809	1 169	49,12488234	9,75961961
1 070	49,13390806	9,77478725	1 120	49,12843684	9,76681918	1 170	49,12479035	9,75949408
1 071	49,13382582	9,77456714	1 121	49,12834665	9,766663899	1 171	49,12470157	9,75933948
1 072	49,13373660	9,77438755	1 122	49,12825740	9,76642251	1 172	49,12458457	9,75919548
1 073	49,13364916	9,77416689	1 123	49,12815849	9,76628677	1 173	49,12448210	9,75905937
1 074	49,13356180	9,77396461	1 124	49,12807734	9,76610801	1 174	49,12437645	9,75891215
1 075	49,13345671	9,77377640	1 125	49,12799718	9,76593932	1 175	49,12425987	9,75876587
1 076	49,13336198	9,77358596	1 126	49,12791257	9,76576368	1 176	49,12415033	9,75864271
1 077	49,13326798	9,77341127	1 127	49,12781551	9,76557861	1 177	49,12404618	9,75849438
1 078	49,13317682	9,77324079	1 128	49,12773149	9,76539092	1 178	49,12395414	9,75835741
1 079	49,13308155	9,77306847	1 129	49,12764251	9,76521032	1 179	49,12384023	9,75822172
1 080	49,13297509	9,77290215	1 130	49,12755571	9,76502764	1 180	49,12373080	9,75808131
1 081	49,13287564	9,77273156	1 131	49,12746874	9,76486914	1 181	49,12363370	9,75793769
1 082	49,13277658	9,77255914	1 132	49,12740122	9,76468792	1 182	49,12352817	9,75781223
1 083	49,13267476	9,77238448	1 133	49,12733136	9,76453430	1 183	49,12342307	9,75766034
1 084	49,13257620	9,77220414	1 134	49,12727230	9,76440029	1 184	49,12331949	9,75749597
1 085	49,13248044	9,77202391	1 135	49,12722798	9,76426752	1 185	49,12322403	9,75735102

GPS-time data

Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree	Time in s	latitude in degree	longitude in degree
1 186	49,12311590	9,75721360	1 213	49,12031855	9,75329170	1 240	49,11991474	9,75252403
1 187	49,12301951	9,75705319	1 214	49,12026809	9,75316211	1 241	49,11992363	9,75253722
1 188	49,12290359	9,75691536	1 215	49,12021670	9,75300101	1 242	49,11992290	9,75253157
1 189	49,12279582	9,75678024	1 216	49,12016323	9,75285930	1 243	49,11992435	9,75251334
1 190	49,12268252	9,75663797	1 217	49,12011509	9,75275993	1 244	49,11991219	9,75249504
1 191	49,12253881	9,75651638	1 218	49,12006735	9,75269255	1 245	49,11991075	9,75247172
1 192	49,12242268	9,75635125	1 219	49,12003562	9,75265678	1 246	49,11991298	9,75247559
1 193	49,12230486	9,75618011	1 220	49,12002056	9,75261286	1 247	49,11991078	9,75249415
1 194	49,12217004	9,75604156	1 221	49,12002848	9,75259638	1 248	49,11991842	9,75251799
1 195	49,12207360	9,75588115	1 222	49,12004169	9,75258698	1 249	49,11993917	9,75252875
1 196	49,12194920	9,75575491	1 223	49,12003124	9,75255607	1 250	49,11995897	9,75252673
1 197	49,12184614	9,75562112	1 224	49,12001826	9,75252570	1 251	49,11996467	9,75250596
1 198	49,12173643	9,75544956	1 225	49,12000818	9,75251196	1 252	49,11995234	9,75249681
1 199	49,12162119	9,75527233	1 226	49,11999380	9,75248418	1 253	49,11993034	9,75247416
1 200	49,12151314	9,75512031	1 227	49,11993742	9,75247046	1 254	49,11993718	9,75246231
1 201	49,12138173	9,75496364	1 228	49,11989938	9,75248209	1 255	49,11994317	9,75245726
1 202	49,12128168	9,75482029	1 229	49,11986307	9,75248293	1 256	49,11995305	9,75245497
1 203	49,12116400	9,75469820	1 230	49,11985449	9,75246761	1 257	49,11996215	9,75245923
1 204	49,12105849	9,75455467	1 231	49,11987184	9,75245925	1 258	49,11996001	9,75246396
1 205	49,12098442	9,75441145	1 232	49,11989506	9,75248670	1 259	49,11997169	9,75248719
1 206	49,12089582	9,75425195	1 233	49,11989719	9,75248730	1 260	49,11996702	9,75248205
1 207	49,12080403	9,75412948	1 234	49,11992056	9,75247882	1 261	49,11996819	9,75247278
1 208	49,12071807	9,75398126	1 235	49,11994218	9,75249140	1 262	49,11996180	9,75245262
1 209	49,12061654	9,75381314	1 236	49,11994905	9,75249651	1 263	49,11995902	9,75245519
1 210	49,12053939	9,75368664	1 237	49,11993472	9,75247340	1 264	49,11994764	9,75244534
1 211	49,12045283	9,75357886	1 238	49,11990932	9,75248530			
1 212	49,12037781	9,75344755	1 239	49,11991158	9,75249184			

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