

BEREC Report on Transparency and Comparability of International Roaming Tariffs

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I. EXECUTIVE SUMMARY AND MAIN FINDINGS

In the end of September 2014 BEREC sent a questionnaire to operators and National Regulatory Authorities (NRAs) in order to gather information on two aspects that are key issues for customers when selecting tariffs for international roaming services: first, *transparency*, meaning the availability of clear information about prices and conditions for each tariff, as well as simple procedures for customers to switch between tariffs; and, second, the *comparability of tariffs*. By comparability BEREC means the ability for customers to compare different types of tariffs offered by operators and to select the one best suited to their needs and pattern of consumption.

In the questionnaire for NRAs, BEREC focused on information about complaints received by NRAs on transparency issues since July 2013 as well as on any information about tariff comparison tools that may be offered by different organizations such as customer associations; recommendations available for customers on how to select the most adequate tariff and any tools and hints for customers to estimate data traffic that may be facilitated by NRAs and any third party (i.e. consumer) associations. The questionnaire for providers was directed seeking information about tariff structures offered, about information for customers on the use of the tariffs and how to switch between tariffs as well as information and tools for comparing tariffs and to estimate the consumption.

Transparency is a key issue in order to be able to take informed decisions. Customers should have an easy access to understandable information on prices and conditions for each existing tariff. It should be also possible to switch between tariffs quickly and conveniently.

When BEREC asked whether NRAs have received transparency related customer complaints, 45% of the NRAs confirmed having received such. Among these, the number of complaints per NRA is very low. Like in the previous reporting period, complaints regarding transparency can't be said to be an issue of major concern. The few complaints received are mainly focused on clarity regarding the terms and conditions of different roaming packages, prices to call premium rate numbers in the home country and missing welcome SMS. Some customers claim that they have not been informed by their provider when the financial cut-off limit had been reached.

Most of the operators report that they provide extensive information on conditions and prices for each tariff on their websites and to furthermore inform customers about tariffs by sending out SMS or USSD (Unstructured Supplementary Service Data) messages. However, the responses indicate that quite a number of operators do not actively inform their customers when they reach a time or volume limit and how services are charged when the usage has reached this limit. This is clearly a point where improvement can be made to avoid bill-shock issues and improve customer experience when using roaming services. In any case, this information should be available for customers at least on the website and in the contract, as customers may have to pay additional charges without having been informed in advance.

Regarding issues related to switching from one tariff to another, most providers facilitate information on switching between tariffs on their website and through call centres.

Information about consumption and charges for the past use may help customers to take informed decisions on which tariff to select. All providers who have answered the questionnaire supply historical service records to their customers. In general, they supply this kind of information in the bill. Some providers also provide e-bills and detailed information on their website, via call centre and/or in specific applications.

Providing data on real-time consumption is more challenging for roaming services, as it is typically based on the collaboration between the home network and the visited network, and the home network does not always have information available on real-time consumption of all services. Nevertheless, BEREC notes that providers improved their transparency when it comes to supplying real time information on consumption compared to the previous report on transparency, being 68 % of the providers that supply real time information on the customer area on their website, via the customer call centre, or by supplying the service records on the customers' handset by sending out SMS or in case of data information by landing page (11 % of the providers the same period last year).

Applications for tablets and smartphones for accessing real time information are not so commonly supplied but BEREC expects that in the short or medium term their use will be more commonly seen since the percentage of operators offering such applications has increased from 8% to 26% in a year.

With regard to the comparability of tariffs, the responses received show that there is a large variety of different types of tariffs, ranging from linear tariffs (such as the Eurotariff) to daily/weekly or monthly bundles of different services and specific tariffs where domestic prices are combined with different kinds of additional fees. Compared to the previous report, more and more providers offer tariffs where customers can use their domestic bundle when roaming, although generally restricted to EEA countries or within the footprint of the group. Moreover, a majority of these offers include some fair-use limitations and not a strict application of domestic rates.

Some offers which include a connection fee, i.e. paying a few Euros per day, allow customers to use their domestic bundle while roaming in EEA countries, or on specific networks defined by the provider. The increase of these approaches to "roam like at home" offers as per default alternative tariffs could encourage customers to also consider roaming services as well when purchasing their bundle. In that sense, BEREC invites operators to be as transparent as possible in their fair-use limitations associated with the "roam like at home" offers.

BEREC welcomes this diversity of tariffs as it increases the customers' ability to adapt and select the most suitable tariff based on their pattern of consumption even though the number of different available tariffs for a European customer varies from country to country. However, choosing from such a large range of different types of offers makes it more challenging and difficult for customers to make informed and optimal decisions. In summary, the more options customers have, the more difficult the task to compare them and make informed decisions will be. BEREC will continue to assess the evolution of the current diversity of tariffs.

Regarding the availability of tables and/or tools for comparing different tariffs, customers in general do not have simple access to any information summarising the features of each set

of roaming tariffs offered by operators. Due to the high burden of updating information about changing tariffs and the focus of public interest on domestic tariffs, this information on international roaming tariffs is not provided in a comprehensive way by consumer associations, thus limiting the information only to certain recommendations and the analysis of only certain alternative tariffs. In general, there is also a lack of availability of simple tables comparing all tariffs offered by the provider. Currently, international roaming is contracted with the same provider that supplies domestic services, and it may help customers to make informed decisions and compare different tariffs if providers supply tables on their website and in their retail outlets. In this sense, BEREC observes a slight increase in the percentage of providers supplying a table comparing international roaming tariffs which might help to increase transparency and comparability of tariffs and encourages operators to publish and keep comprehensive information up to date on all active offers in one place.

Customers must be able to select the most suitable tariff based on their own estimated pattern of consumption. In this regard, BEREC also explored the availability of tools and information for customers to estimate their traffic based on the use of internet services such as e-mail sending/checking, web pages browsing, video streaming, etc. BEREC's analysis shows that customers do not have straightforward and simple access to information and tools to estimate their consumption of data traffic (MB) and prices for usage for roaming services. Although some of the providers supply convenient tools and clear information, this is not the case in general and the situation has not changed significantly since the previous review made in 2013. This is one of the potential issues that may result in bill-shocks as well as in customers underestimating or overestimating traffic when they contract bundles, leading to non-optimal decisions. Tools, hints and other information allowing customers to estimate data traffic increase significantly transparency and efficiency in the market.

In general, apart from some isolated cases, NRAs and consumer organizations do not provide tools to help customers to estimate data traffic, but some of them supply information and hints on how to estimate traffic consumption. BEREC identified some good examples such as tools using icons and other customer-friendly interfaces which estimate data consumption that could be used as a reference for further enhancement and development of new and existing tools that may help customers to make informed decisions. Additionally, something considered as advisable would not only be to provide data traffic estimations in MB, but also the maximum price that customers would have to pay under the Eurotariff. This could help users to better compare the Eurotariff with alternative tariffs.

BEREC will repeat this exercise each year to assess the evolution and advances in increasing the transparency and comparability of tariffs.

II. INTRODUCTION AND OBJECTIVES OF THE DOCUMENT

The market for electronic communications has been providing a steadily increasing number of offers. Accordingly, users may find it more difficult to compare the various offers as well as to compare the performance parameters of different services. Specific tools to measure consumption could help to create certainty about the offers in order to allow customers to assess and compare what they pay for and what they use. Regarding service providers, these tools may help them to differentiate more clearly their offers. Especially in the case of data services, considering the increased use of smartphones and tablets, the availability of applications for the most common operating systems would enable customers to take informed decisions based on their patterns of consumption.

The selection of an alternative tariff should be done taking full account of the possibility to use the Eurotariff and of the conditions for the alternative tariff chosen. Such an awareness, together with policies and instruments which allow customers to estimate their consumption and compare international roaming tariffs, will lead to better informed customer decisions.

In this context, and in accordance with Article 19(4) of the Regulation on roaming on public mobile communications networks within the Union (III) (EU) No. 531/2012 (hereinafter "the Roaming Regulation"), each year BEREC will publish information on the transparency and the comparability of different tariffs offered by operators to their customers.

In line with the provisions set out in the Roaming Regulation, the Report has the following objectives:

1. To investigate specific problems which prevent or impede customers from taking informed decisions. As part of this objective, the Report aims to assess whether offers are transparent, and to investigate transparency issues concerning charges which may be applied and other billing issues.

2. Comparability of tariffs. Under this objective, the report aims to assess how easy it is for customers to compare different roaming tariffs, especially to compare the Eurotariff with other alternative tariffs, and to identify whether customers are able to take informed decisions when selecting the most suitable tariff based on their needs. The report also includes an overview of the different structure of roaming tariffs offered by the mobile operators.

III. INFORMATION COLLECTED BY BEREC

In order to investigate whether customers face transparent conditions and are able to compare different tariffs, BEREC prepared two questionnaires addressed to the operators and the NRAs respectively.

With regard to assessing transparent market conditions, the questions focused on the availability of roaming tariffs and the conditions applied (price limitations in terms of volumes or geographical area, or any other restrictions as well as any linkages to domestic tariffs etc.). Operators were also asked whether they provided transparent information about the start and end of a specific period for a given, time-limited, tariff. BEREC also asked whether operators informed their customers about any possible tariffs/charges when a bundle is exhausted or where the valid time period for the tariff elapses, as well as whether bills were itemized. NRAs were requested to provide any information on customer complaints concerning any alleged lack of transparency.

With regard to assessing the comparability of tariffs, BEREC's attention was focused on the availability of tools, applications and any information facilitating the selection of the most adequate tariff to suit the customers' pattern of consumption.

A total of 28 National Regulatory Authorities (NRAs) sent their responses to BEREC.

BEREC received a total of 128 responses from mobile providers operating in EEA countries. Of these 128 responses, 93 MNOs and 35 corresponded to full MVNOs or resellers.

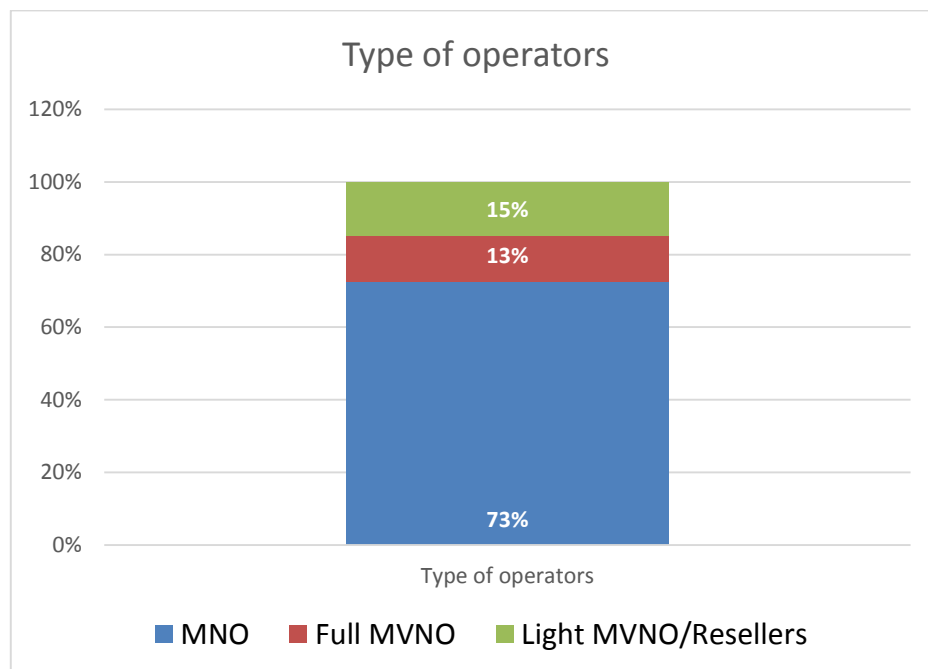


Figure 1: Type of mobile providers responding to the BEREC questionnaire

IV. Transparency of roaming services

1.1. Transparency complaints received by NRAs

Near 45% of the responding NRAs received complaints on transparency issues since July 2013. This is a slight reduction compared to the previous period, where 50% of the responding NRAs had received complaints. In general, the NRAs that reported having received such complaints stated that the number was very low. Customers' complaints were due to missing or unclear information about the terms and conditions on different roaming packages available, calls to premium rate numbers or missing welcome SMS. Some end-users did post complaints regarding issues with the cut-off limit. There were a couple of complaints regarding maritime roaming and charges for usage outside of the EEA, however this is outside of the scope of the Roaming Regulation.

26% of the NRAs reported complaints about the lack of clarity and/or accessibility of information on international roaming tariffs. In the previous reporting period, 30% of the NRAs reported having received complaints. Some customers complained about the difference between an international call and roaming call being unclear, while some also complained about information on what happens to tariffs when new states join the EU. There were also reports on complaints from customers that their pricing was based on alternative tariffs rather than the Eurotariff, and some customers also seemed to confuse the terms that applies when selecting alternative tariffs over the Eurotariff.

1.2. Information on switching between alternative tariffs

The large majority (around 85%) of providers offering alternative tariffs do not apply any activation charge when their customers switch between any of their tariffs.

For alternative tariffs limited in time, close to 80% of respondents inform their customers actively about the start and end of the tariff period. They also inform customers about the charges that are applied for roaming services when the alternative pricing period ends. This still means that about 20% of the providers do not actively inform their customers on what charges are applied after the end of the alternative tariff period – but this value may be a bit overestimated due to the fact that some providers misunderstood the question.

When customers have contracted a bundle with roaming services that includes a limited number of minutes, SMS and/or limited amount of data services, the majority, (around 80% of respondents), notify their customers when he/she reaches the limits included in the bundle. They also inform them via SMS, the website etc. about the charges applied for out-of-bundle consumption. This is more or less the same percentage as reported in the previous BEREC report. On the other hand, this means that some operators do not inform their customers when they reach the limit included in the bundle and about the charges that apply out-of bundle. This can be damaging for customers as they could end up paying additional charges without having been thoroughly informed in advance.

Providers mainly inform customers about the issues mentioned above by sending them a notification-SMS or through the use of USSD¹-based tools. A large majority also specify that the tariffs are available on their websites. Some also send newsletters or have developed smartphone applications for data consumption. Customers can also contact the customer care service and the point of sales for information on tariffs.

Most respondents provide information concerning switching between tariffs on their websites, through SMS, via call centers or points of sale. The figure below shows the different channels of information that are used most. Other means includes, for example, so called MyPage service, redirection to web page, IVR², brochures, by sending out emails or via mobile applications.

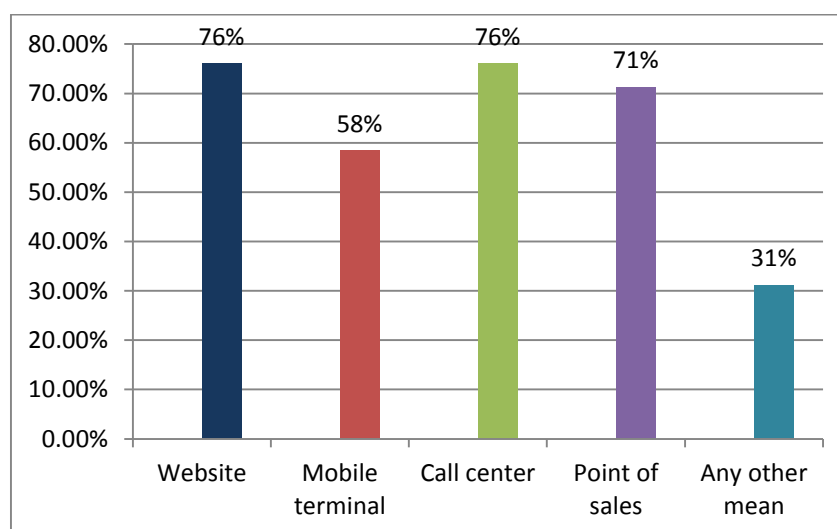


Figure 2: Supply information concerning switching between tariffs

1.3. Methods of providing information about consumption

This section addresses the methods used by providers to inform their customers on historical and real time consumption of international roaming services. The questionnaire provides some examples of methods commonly used by providers for providing information about consumption such as providers' websites, interaction with the mobile terminal of the customer, call centres, applications or any other means specified by the provider.

First, BEREC notes that providers are using different methods to provide historical information on consumption and charges, ranging from paper bill, customer area on the website, calls to the customer centre, interaction via the terminal using short codes, to specific applications for smartphones and tablets. The majority of the operators enable their customers to use different methods to access this information.

As shown in the following figures, similar methods are also used to provide information on real time consumption.

¹ Unstructured Supplementary Service Data
² Interactive Voice Response

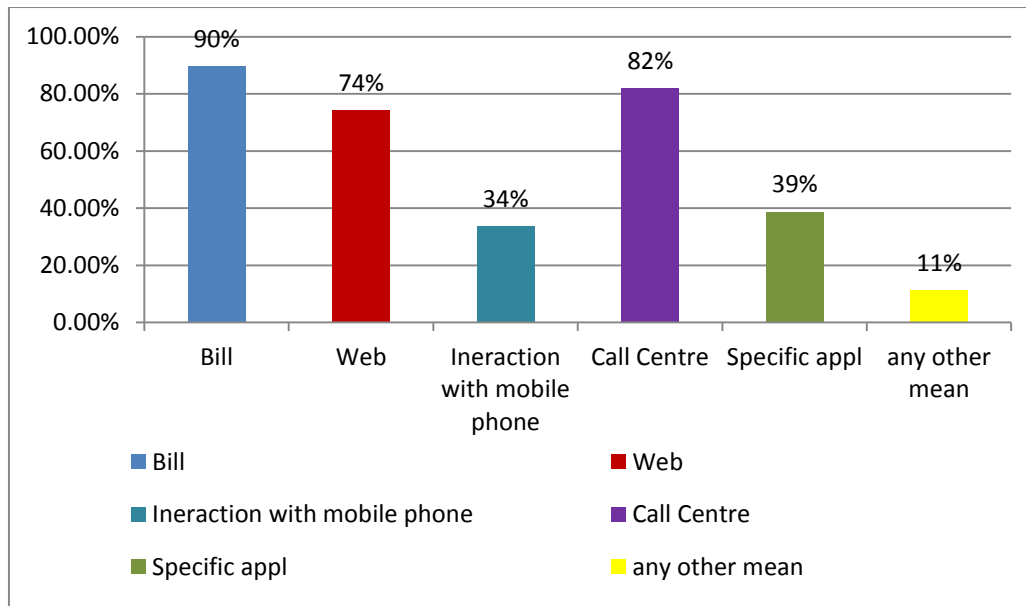


Figure 3: How providers inform about the charges and/or volumes consumption (historical)

For clarity, “real time” information does not include information provided in “near” real time as providing information with a certain time lag cannot be defined as instantaneous delivery. Some providers state that delivering information by a certain date is “near” real time because information is delivered within 24 to 48 hours after the request. In addition, real time information refers only to the provision of real time information for voice, SMS and data by the same provider. Providers that supply real time information only for data services are excluded from the chart and they account to 12% of all providers.

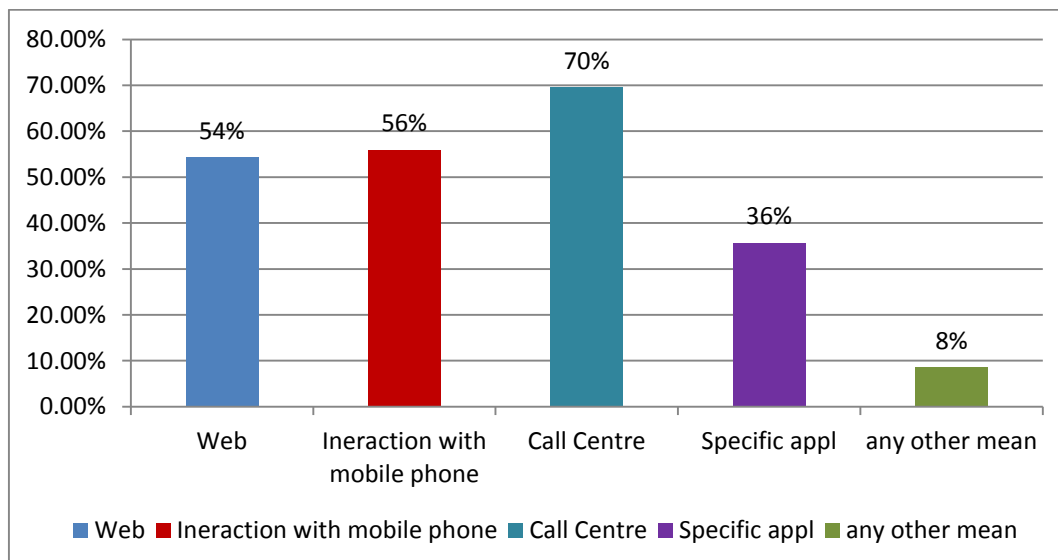


Figure 4: How providers inform about the charges and/or volumes consumption (real time information)

In cases where historical information is delivered to the customer, this is mostly done via bill (90%), the customer area on the providers' website (74%) and call centre agents (82%). 100% of the providers supply historical service records to their customers and even 54% of the providers supply real time information via the customer area on the website, via the customer calling the customer centre, or by supplying the service records on the customers' handset by sending out SMS or in case of data information by the landing page. If we add to this number also providers that supply their customers with "near" real time information and providers that provides information in real time only for data services, we get 68% of the providers that provide some kind of real time information on consumption. Some providers notify their customer via email as soon as the agreed usage limit is reached.

There are some methods which require some action by the customer such as dialling a short code or sending a keyword to a short code and upon doing so they will receive an SMS giving their call credit and data usage balance.

Specially designed applications available on smartphones or tablets do not seem to be very popular compared to call centres, websites and sending out SMS. Nevertheless, applications for accessing historical and real time information are offered by some providers (39% of all providers for historical data and only 36% for real time or "near" real time information or real time for data only) and BEREC expects that in the short or medium term more applications for tablets and smartphones will be available for customers.

BEREC notes that providers improved their transparency when it comes to supplying information on consumption compared with the previous report on transparency and comparability of tariffs. This is particularly true for access to real or "near" real time information, that has improved significantly compared to the previous report.

1.4. Information on volume consumption and charges

This section analyses the provision of separate itemized information relevant to the roaming services, charges and volumes in the monthly bills as well as real time billing information. The wide adoption of such practices ensures transparency among the European providers with regard to roaming charges as it makes clear how much the subscribers pay and what they get in return.

BEREC asked operators whether customers were provided with service records containing volumes and charges as well as real time billing information. The information collected on charges and volumes was then separated into outgoing voice calls, incoming voice calls, outgoing SMS and data services.

Customers generally have a good knowledge about the roaming charges and the volumes of the regulated roaming services they consume, as about more than 80% of the operators deliver the necessary service records to their customers in the monthly bills. However, BEREC notes that a minority of the providers supply information about charges but not about volumes.

In addition, only 37% provide the itemized charges and volumes in real time for calls and 29% for SMS. 45% of the operators provide real time information concerning charges for the data services.

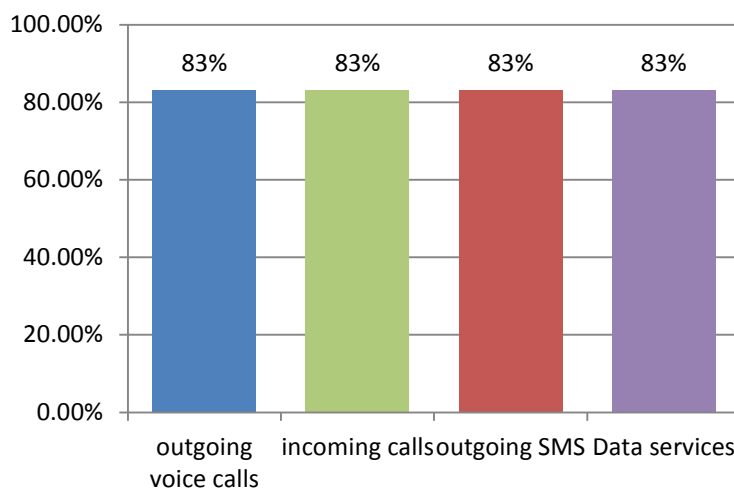


Figure 5: Information for customers about charges for intra-EU roaming (monthly information)

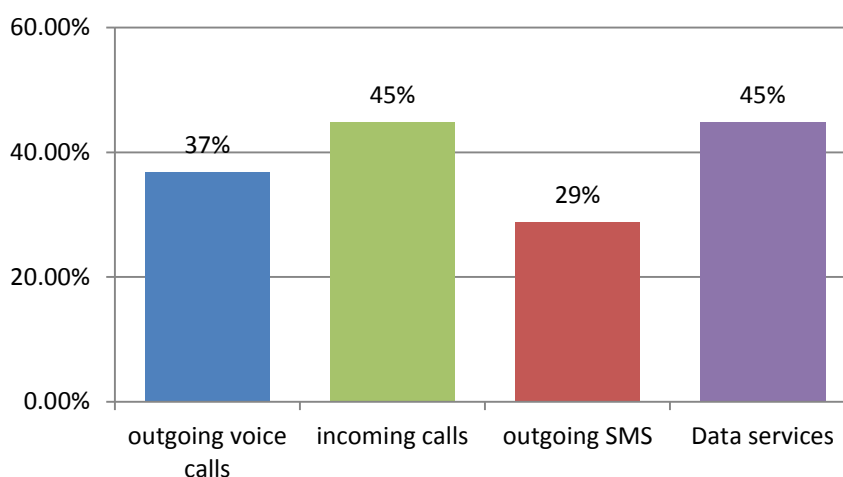


Figure 6: Information for customers about charges for intra-EU roaming (real time information)

BEREC notes that there is a variety of ways to provide prices or volumes for the three services to the customer. Some operators only deliver information on volumes, others only on the prices. In certain cases operators provide price and traffic information on all three services, but in other cases the records are restricted to one or two services only. Overall there is no significant difference between providing real time information on prices and volumes regarding the type of service considered.

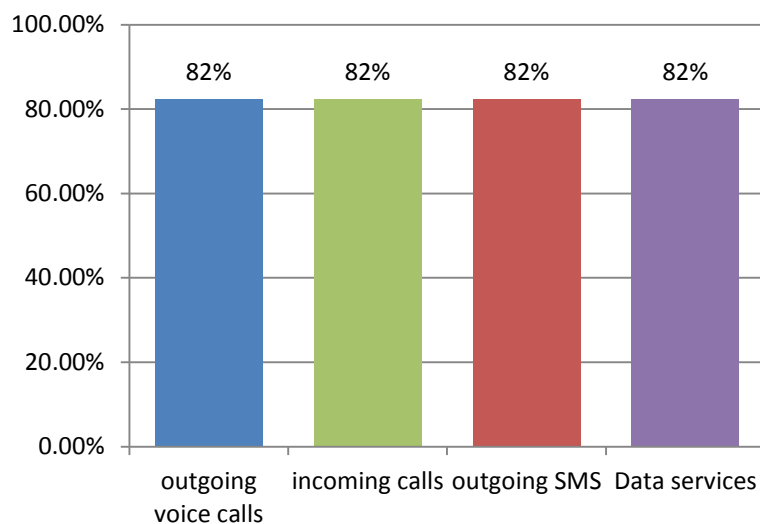


Figure 7: Information for customers about consumption for intra-EU roaming (monthly information)

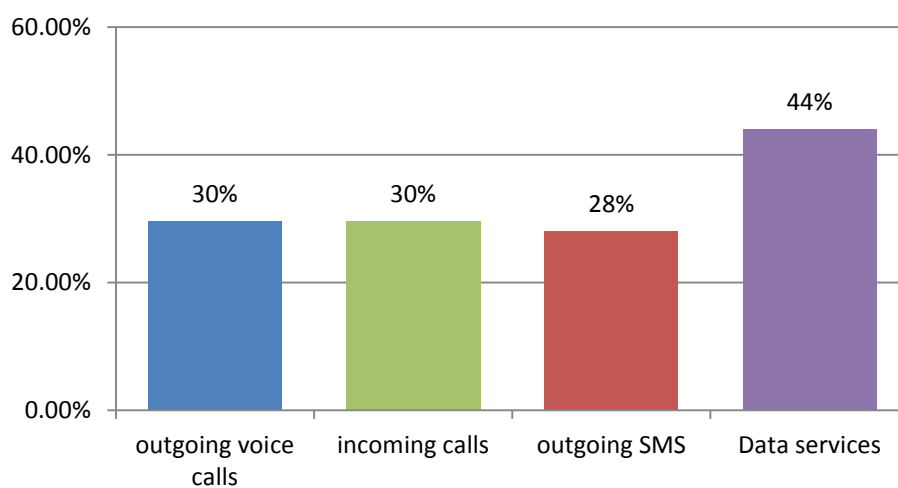


Figure 8: Information for customers about consumption for intra-EU roaming (real time information)

V. COMPARABILITY OF INTERNATIONAL ROAMING TARIFFS

1.1. Diversity of tariff structures

Problems on comparability of alternative roaming offers can arise because of many different reasons, either because there is a lack of information, as described in the previous chapter, or due to other factors such as an increasing number of different tariffs, the increasing complexity of tariff structures, as well as bundling of different services. This could lead to non-optimal decisions when customers wish to choose the most suitable roaming tariff. This section gives an overview of the different roaming tariffs that are offered by European operators.

The easiest tariffs to understand are obviously linear tariffs, as their pricing, such as per used minute/SMS or MB is comprehensive and easy to compare with other linear tariffs. In general, linear tariffs are not included in or associated with any specific domestic tariff. So although they are available for all customers and for all domestic tariffs, they are rarely a purchase factor when customers choose a domestic offer.

Alternative linear roaming tariffs are offered by more than half of the providers replying to the questionnaire. Nevertheless, it must be noticed that some of these operators have considered Eurotariff also as an alternative linear roaming tariff. So the number of offers presented in this table here below is potentially artificially increased. Most of these tariffs are not restricted to a specific time period, but are applied as long as the customer does not switch to any other roaming tariff.

	Tariff exist	Bundle restricted to one day	Bundle restricted to more than one day and up to a week	Bundle restricted to more than one week and up to a month
Linear tariff Voice	58	0	0	6
Linear tariff SMS	53	0	0	3
Linear tariff Data	53	6	3	7

Table 1: Availability of linear tariffs

Around 36% of the providers offering linear alternative roaming tariffs replied that their linear tariffs were restricted to a limited number of countries, most of them to EEA countries. One to seven providers (depending on the roaming service) offer linear tariffs that can only be used when roaming on specific networks and only one to three providers replied that some of their linear tariffs are restricted to the usage of the group footprint.

	Tariff exist	Roaming tariff is restricted to a limited number of countries	Tariff is restricted to the use of the group footprint	Tariff is restricted to the use of certain networks of any other operator
Linear tariff Voice	58	21	3	5
Linear tariff SMS	53	17	2	2
Linear tariff Data	53	21	1	9

Table 2: Characteristics of linear tariffs

As mentioned above, complexity for customers increases with the number of different bundle tariffs, which means that a certain amount of units of one or more services (minutes, SMS, MB) is included in a fixed fee for a specified period (day, week, month). An overview of the availability of roaming bundle tariffs is shown in Table 3. 33% of the providers offer tariffs which include a package of minutes, 12% of the providers offer packages of SMS and 64% of the providers offer packages of data traffic measured in megabytes (MB).

Bundles with more than one service included are also offered by a significant number of providers. 13% of the providers offer bundles with minutes and SMS, 65% of the providers offer bundles with minutes and MB and 28% of the providers offer tariffs that include all three services (voice, SMS, data). Only six providers supply bundles with SMS and data services.

Most of the bundle tariffs include a restricted usage of more than one week but less than one month. For bundles of MB there are also a significant number of providers (27%) that restrict these tariffs for a period of between one day and a week.

	Tariff exist	Bundle restricted to one day	Bundle restricted to more than one day and up to a week	Bundle restricted to more than one week and up to a month
Bundle minutes	42	7	8	29
Bundle of SMS	16	1	2	13
Bundle Mb	83	50	34	51
Bundle voice + SMS	29	3	7	23
Bundle voice + Data	23	3	2	11
Bundle SMS + Data	8	1	1	7
Bundle voice + SMS+ Data	36	12	9	19

Table 3: Availability of bundles

A large majority of the providers restrict their bundle tariffs to a limited number of countries, which are in most cases the EEA countries. Only a few of the bundle tariffs are restricted to the use of the group footprint or to certain networks of other operators.

	Tariff exist	Roaming tariff is restricted to a limited number of countries	Tariff is restricted to the use of the group footprint	Tariff is restricted to the use of certain networks of any other operator
Bundle minutes	42	33	1	5
Bundle of SMS	16	14	0	0
Bundle Mb	83	63	5	17
Bundle voice + SMS	29	26	3	3
Bundle voice + Data	23	17	1	2
Bundle SMS + Data	8	6	0	1
Bundle voice + SMS+ Data	66	30	2	6

Table 4: Characteristics of bundles

The questionnaire also asked whether providers offer tariffs where domestic rates are applied for roaming services, tariffs where customers could use their domestic bundle when being abroad without paying (“roam like at home” tariffs) or an additional fee or paying e.g. a daily connection fee. Compared to the previous report, more and more providers offer tariffs where customers can use their domestic bundle when roaming, generally restricted to EEA countries and very few of these tariffs are restricted to the use of the footprint of the group. A majority of these offers include some fair-use limitations and not a strict application of domestic rates. Some offers which include a connection fee, i.e. paying a few Euros per day allow customers to use their domestic bundle while roaming in EEA countries, or on specific networks defined by the provider.

When roaming volume is included in the domestic offers, customers could compare the offers more easily and take into account roaming services when they chose their domestic offer. So, the quantity of roaming included becomes also a purchasing factor as the domestic volume. Nevertheless, the variety of fair-use limitations due to the variety of domestic offers complicates the choice process of the most suitable offer for the customer.

	Tariff exist	Roaming tariff is restricted to a limited number of countries	Tariff is restricted to the use of the group footprint	Tariff is restricted to the use of certain networks of any other operator
Application of domestic rates	17	14	3	5
Connection fee + Domestic Rates	16	13	2	1
Connection fee + other Rates	25	18	1	4
Roaming services included in domestic bundle	57	46	5	7

Table 5: Restriction of alternative tariffs

To sum up, comparing prices for roaming services is complicated by the wide range of possible usage patterns (frequent traveller versus occasional traveller) and the detailed variations in price levels and price structures (e.g. tariffs for a restricted time period, for a restricted number of countries/ networks etc.). It is quite easy to compare different linear tariffs and find out the best price, but it is not considered as a key factor for the customer when he/she choose its domestic offer. On the other hand, the increase of approaches to “roam like at home” offers as per default alternative tariffs could permit to the customers to also consider roaming service when they purchase their bundle. In order to find out the best deal customers would need to analyse their travel behaviour (how often they travel, which countries they visit, or on which networks they roam) as well as their roaming consumption pattern (number of calls made and received, number of SMS and data services used), which is unfortunately quite difficult to anticipate, especially for data services.

Nevertheless, given the alternative tariffs, especially approaches to “roam like at home” offers, BEREC invites operators to be as transparent as possible in their fair-use limitations and operators and customer associations to consider providing practical examples of roaming usage (including voice, SMS and data) which might illustrate when it might be advantageous to take up an alternative roaming offer from an existing provider in a similar way to illustrations which may currently be provided in the context of choosing a domestic package best suited to the customer’s usage.

1.2. Availability of up to date information on existing tariffs

In many EU Member States the variety of roaming services for customers is highly limited, and when there are alternative offers it is not usually convenient for customers (particularly for light and moderate users) to compare international roaming tariffs and choose the right package from different providers. Roaming services are sold as additional services in a bundle, which usually includes domestic mobile access. In the retail market, the focus of competition is on domestic services, due to customer preferences and the fact that the bulk of them spend far more on domestic services. All these different factors significantly influence customer choice and the costs of services, and thus can make any comparison difficult. In any case, availability of information comparing different tariffs at least for each provider is a first step to empower customers to take informed decisions on roaming offers.

Tables on providers' websites comparing tariffs available for customers

BEREC asked whether providers supply any table or tool on their websites, which enable customers to compare the prices and terms and conditions of the tariffs available for intra-EU/EEA international roaming.

50% of the providers reported supplying a table comparing international roaming tariffs, and almost all of them also provided a link to the current website. Compared to the previous year this means an increase (41%). A closer look at the links showed that just 30% of the providers actually allow customers to compare tariffs at one glance, whereas 70% of the providers either present the different tariffs separately not allowing a comprehensive comparison of tariffs, or just offer tariff for intra EU international roaming, When it comes to providing customers with applications to help them in the selection of an adequate tariff, only 8% reported doing so.

Tables and assessment from customer associations and other organizations

BEREC asked NRAs if customer associations or any other organization provide tables or any other information that allow comparing tariffs for international roaming offered by different operators, as well as access for customers to publicly available reports comparing international roaming tariffs.

Approximately 15% of the responding NRAs are aware of such comparison tables. These NRAs kindly provided links from consumer associations. Unfortunately it proved that the information supplied does not cover all possible tariff plans of all the providers. The focus is mainly on non-regularly information on alternative tariffs for customers and general information about the Eurotariff. The number of consumer associations or other organizations providing applications for customers to decide on which type of tariff to select is quite restricted.

Only 4% of the NRAs say that reports on comparison of international roaming tariffs are provided by the consumer associations. Those reports compare tariffs for international roaming from different operators at a certain moment in time. BEREC believes that providing such a comprehensive tool would consume too many resources for those organizations as they would have to closely monitor a variety of tariff plans in real time in order to keep the information updated. Additionally, for most customers, international roaming is of interest only at certain times of the year (usually during holiday periods) compared to domestic services where real time comparison tools are of interest throughout the year and are readily available.

Tables with tariffs on NRAs websites

BEREC also wanted to know whether NRAs provide up-to-date information on their websites. 37% of the responding NRAs actually provide such information and supplied a link. As was seen for operators in the previous section, it turned out that getting a comprehensive overview of all different tariff plans is also quite difficult for NRAs. NRAs supplied general information about the Roaming Regulation and the caps applied, and in some cases

supplied links to the websites of providers where customers could find international roaming tariffs.

30% of the responding NRAs reported that they publish general recommendations for customers which may help them to select the most suitable international roaming tariff. However, a closer look at the links showed that a certain part of the information consisted of links to the websites of providers, general information, information on caps for international roaming tariffs and some advice on how to cope with data roaming usage (bill-shock and/or advice to switch off roaming).

BEREC observes that, as it happens with consumers associations it is not easy for NRAs to provide a comprehensive comparison tool. In the case of NRAs, this is partly due to legal obstacles but also because this is not considered as being the responsibility of a NRA but rather as the task of the market players. Additionally, as happens also with consumer associations, the burden of resources implied of having up-to-date information on existing roaming tariffs is high and may inhibit initiatives in this area.

22% of the NRAs have produced publicly available reports on comparison of international roaming tariffs, where the comparison between the Eurotariff and alternative tariffs is an example of study. Almost 15% of NRAs provide applications available for customers to decide on which type of tariff to select based on estimation of consumption for international roaming,

1.3. Hints for customers to estimate data traffic

When assessing the comparability of roaming tariffs it is necessary for the customer to estimate the usage of mobile data traffic based on usage patterns and needs for different internet services when travelling abroad. As we have seen in previous sections, many of the tariffs are based on bundles of voice minutes and/or SMS and/or data traffic to be used in a certain time period. In order to be able to make an informed decision of the most suitable roaming tariff, the user should have the information which is necessary to estimate the likely consumption of roaming services.

Although estimating consumption of voice and SMS is not straightforward, the relation between price paid and service used can be directly related to consumption of roaming call minutes and SMSs. Therefore, it is relatively easy to estimate the volume needed and price to be paid for using roaming voice and SMS services.

The situation is very different for roaming data services. For data users, it is quite difficult to estimate consumption of data traffic which services generates in terms of MB and thus to estimate the required amount of MB for certain usage pattern. Contrary to voice or SMS, each different data service or application may involve different amount of traffic consumption and the amount of consumption may not be transparent in the user's point of view. For instance, even if a user manage to forecast the number of emails expected to be received in a certain period, the amount of traffic may deviate from the estimation depending on e.g. sizes of attachments in emails.

BEREC considers that customers' ability to estimate international roaming traffic is vital in order to compare international roaming tariffs and select the most suitable tariff. Therefore,

any hints for estimating data usage in advance provided by NRAs, operators, consumer associations and other organizations would help customers to select the best tariff corresponding to their usage patterns.

In order to review users' access to the information necessary for making informed decisions, BEREC asked NRAs and operators whether they offer users information, applications or other tools to estimate consumption of services.

Around 18% of the responding NRAs reported having published information or applications to help customers to estimate data traffic consumption. Around 11% of the responding NRAs reported that organizations such as consumer associations provide such information or tools. Those NRAs and consumer associations which have published information usually provide general hints and information on the use of data roaming services and tariffs of providers. For example, the Norwegian NRA NPT provides a static table to help customers to estimate their consumption³. The Irish NRA ComReg provides a roaming calculator in order to compare roaming price plans based on consumption of voice and SMS services.

Figure 9: An example of a tool provided by a NRA for comparison of roaming price plans based on consumption⁴

³ Please find a link to the referred service; <http://www.npt.no/forbruker/forbrukerportaler/om-forbrukerportaler/telepriser.no>

⁴ Screenshots obtained from the following links, http://www.callcosts.ie/mobile_phones/roaming_calculator.293.LE.asp

Some providers (approx. 37%) reported that they provide information or tools for estimating data consumption as well. Several models have been identified:

- 1) Providers describe how to estimate data traffic for different types of services, such as the amount of MB an email has or video streaming or mp3 download takes etc. Some of these tools are intended for estimation of data consumption in general. Information may be provided e.g. by simple graphical presentation or information in bullet points as these two examples show.



— Kā aprēķināt patērēto interneta apjomu?

Lai palīdzētu novērtēt patērēto interneta apjomu, esam sagatavojuši "špikeri".

- E-pasts, kas satur tikai tekstu, t.i., bez pielikumiem, – 0,01 līdz 0,1 MB
- A4 izmēra teksta dokumenta atvēršana (lejupielāde) – 0,2 MB
- Interneta ziņu portāla atvēršana – 2,5 MB
- Augstas izšķirtspējas fotogrāfijas lejupielāde – 2 līdz 4 MB
- Mūzikas faila lejupielāde – 5 MB
- YouTube videoklipa skatīšanās – vidēji 5 MB minūtē, taču interneta apjoms ir atkarīgs no video izšķirtspējas – jo tā augstāka, jo patērētais interneta apjoms būs lielāks
- Interneta radio atskaņošana – 1 MB minūtē

Figure 10: Some examples of information supplied by providers on traffic consumption for different types of Internet Services⁵

- 2) Providers describe how different internet services such as e-mail, web browsing, video streaming, use of social networks etc. can be combined for each roaming tariff. In this case, the starting point is the tariff to be contracted and customers are informed about the typical use combinations in terms of traffic. The following figure shows an example of this model.

⁵

Screenshots obtained from the following links provided by providers:
<https://www.go.com.mt/personal/mobile/mobile-internet/discover-mobile-internet>
<http://www.lmt.lv/lv/interneta-lietosana?fid=257>

Se normalpriser på data og mms i udlandet

		Norden	EU	Øvrige Europa	USA/Canada Verden 1+2
		Normalpris	Normalpris	Normalpris	Normalpris
Pris pr. MB (inkl. moms)		1,86 kr.*	1,86 kr.	75 kr.	110 kr.
Situation og estimeret dataforbrug					
Mail m. vedhæftet billede	op til 3,5 MB	6,51 kr.	6,51 kr.	262,50 kr.	385 kr.
Hent/send mail					
Sende mms	2 MB	3,72 kr.	3,72 kr.	150 kr.	220 kr.
Surfe på nettet i 3 minutter	8 MB	14,88 kr.	14,88 kr.	600 kr.	800 kr.
Facebook	1 MB	1,86 kr.	1,86 kr.	75 kr.	110 kr.
Uplode billede					
Google Maps	6 MB	11,16 kr.	11,16 kr.	450 kr.	660 kr.
Navigation i 45 minutter					

*) Der gælder andre priser, hvis du har [Bredbånd Udland](#)

Figure 11: Example of information provided by operators on intensity of use of Internet Services for each roaming tariff⁶

- 3) Providers also supply tools where customers can interact by using sliding bars or boxes to select the number of e-mails, period of web browsing etc., and the application supplies an estimate of the number of MB which will be used based on this data. Many of the tools are oriented to providing estimates for monthly consumption, but some of them allow for daily or weekly estimations and are focused on international roaming.

Изчислете своето интернет потребление

Иползвайте плъгачите, за да проверите с каква цел влизате най-често в интернет и да изчислите своя дневен или месечен трафик. Имайте предвид, че Wi-Fi потреблението от безплатни зони за достъп не се включва в месечния ви план и не може да бъде отчетено от този калкулатор.

Изберете вид устройство

Изберете срок на потребление

Смартфон Лаптоп

Дневно Месечно

Колко интернет страници разглеждате?

0 страници

Колко игри, песни и приложения сваляте?

0 сваляния

Колко електронни писма (без прикачен файл) получавате и изпращате?

0 писма

Колко време слушате музика онлайн?

0 минути

Колко електронни писма с прикачен файл изпращате и получавате?

0 писма

Колко минути гледате видео онлайн?

0 минути

Поставяте със снимка в социална мрежа

0 поста

Изчисли

Потребление

2 GB

1 GB

250 MB

0 GB

* Показаните стойности са приблизителни

Figure 12: Example on a tool provided to allow for traffic estimation based on Internet Services use⁷

⁶ Screenshot obtained from the following link provided by the provider: <http://www.telenor.dk/privat/kundeservice/kundeservice/mobil/hjaelp-til-abonnement/udlandspriser/udlandet/priseksempler/index.aspx>

⁷ Screenshots obtained from the following links provided by providers: <http://www.mtel.bg/izchisli-svoja-internet-trafik>

In general, these tools do not provide the final price for customers, which in the end will depend on the specific tariff selected. However, it would be useful for customers to know at least what would be the price under the Eurotariff when roaming, which can be considered a good reference for comparison as it is the default tariff for most customers.

In conclusion, despite the good practices e.g. those presented above, BEREC's analysis has shown that in several cases customers do not have straightforward and simple access to information and tools to estimate their consumption of data traffic (MB) and prices for data usage when roaming. Although some of the providers supply convenient tools and clear information, this is not the case in general and situation has changed only slightly since the previous review made in 2013. However, all the tools, hints and other information allowing customers to estimate consumption of data traffic increases transparency and efficiency in the market as customers can make better informed decisions.

BEREC identified some good examples from simple informative graphics and tables to graphical interfaces which provide information on different scenarios. Those could be used as a reference for further enhancement and development of new and existing tools. Such tools, which estimate data consumption, are in general easy to implement and may help a number of customers to choose roaming tariffs (such as bundled offers). Using graphical icons and other user-friendly ways to demonstrate relation between usage patterns and estimated data consumption may help customers to make informed decisions. Additionally, something considered as advisable would be not only to provide data traffic estimations in MB, but also the maximum price that customers would have to pay under the Eurotariff. This could help users to better compare the Eurotariff with alternative tariffs.

Although providers' websites are an adequate place for customers to access this type of tools, BEREC encourages NRAs, consumer associations and other organisations as well to provide tools for users to estimate their mobile data consumption.

Annex 1: QUESTIONNAIRE SENT TO NRAs

1.- Identification	
Name of the NRA:	<input type="text"/>
Country:	<input type="text"/>
Contact person for doubts in the questionnaire:	<input type="text"/>
e-mail contact person:	<input type="text"/>

2.- Questions on transparency			
2.1.- Complaints on transparency (received from July 2013)			
	<table border="1"> <tr> <td>Yes</td> <td>No</td> </tr> </table>	Yes	No
Yes	No		
Have you received complaints from customers on transparency issues?	<input type="text"/>		
If yes, please describe the issues most cited by customers as transparency issues			
<input type="text"/>			
	<table border="1"> <tr> <td>Yes</td> <td>No</td> </tr> </table>	Yes	No
Yes	No		
Are you aware of any problems or issues relating to a) the clarity or b) the accessibility of information on International Roaming tariffs provided by any of your operators?	<input type="text"/>		
If response to previous question is "yes", please provide details below:			
<input type="text"/>			

3.- Information available to customers in the NRA website facilitating comparison of tariffs made public from July 2012			
	<table border="1"> <tr> <td>Yes</td> <td>No</td> </tr> </table>	Yes	No
Yes	No		
Is there updated information in your website comparing tariffs for international roaming from different operators?	<input type="text"/>		
If yes, provide the link			
<input type="text"/>			
	<table border="1"> <tr> <td>Yes</td> <td>No</td> </tr> </table>	Yes	No
Yes	No		
Have you produced any publicly available report on comparison of international roaming tariffs?	<input type="text"/>		
If yes, provide the link			
<input type="text"/>			

	Yes	No
Do you publish any set of general recommendations for customers in order to help them to select the most adequate international roaming tariff?		
If yes, provide the link		
	Yes	No
Is there any application provided by the NRA available for customers to decide on which type of tariff to select based on estimation of consumption for international roaming?		
If yes, provide the link		
	Yes	No
Do the NRA provide any application or information for customers to estimate data services consumption based on the estimated use of Internet Services as web browsing, e-mails, and specific applications as Google Maps or Whatsapp?		
If yes, provide the link		

4.- Information available to customers provided by consumer associations or other organizations facilitating comparison of tariffs (made public from July 2013)		
	Yes	No
Do customers associations or any other organization provide tables or any other information comparing tariffs for international roaming from different operators?		
If yes, provide the link/s		
	Yes	No
Have customer associations or any other organization produced any publicly available report on comparison of international roaming tariffs?		
If yes, provide the link		
	Yes	No
Have consumer associations or any other organization publish any set of recommendations for customers in order to help them to select the most adequate international roaming tariff?		
If yes, provide the link		
	Yes	No
Is there any application provided by customer associations or any other organization available for customers to decide on which type of tariff to select based on estimation of consumption for international roaming?		

Annex 2: QUESTIONNAIRE SENT TO OPERATORS

1- Identification							
Name of the provider							
Country							
Type of provider (mark with a cross in the corresponding cell)							
					MNO		
					Full MVNO		
					Light MVNO/Reseller		
2- Structure of alternative tariffs for international roaming (intra-EU)							
2.1- Structure of alternative tariffs							
Alternative tariffs means roaming tariffs that are offered by operators in addition to the default Eurotariffs.							
Please, respond yes/no in the corresponding cells.							
If there are several tariffs qualifying for any row, you can mark as yes several columns for that row if different tariffs have different time limits or conditions							
	Existing tariff? (yes/no)	Time limit to use the bundle restricted to one day ?	Time limit to use the bundle restricted to more than one day and up to a week? (Yes/No)	Time limit to use the bundle restricted to more than one week and up to a month? (Yes/No)	Is this tariff restricted to a limited number countries (if yes, specify "EEA", "Non EEA countries" or "others" ?	Is this tariff restricted to the use of the group footprint ? (Yes/No)	Is the tariff restricted to the use of certain networks of any other operator? (Yes/No)
Linear tariff Voice per minute							
Linear tariff SMS per unit							
Linear tariff Data Services per Mb							
Bundle of a number of voice minutes							
Bundle of a number of SMS							
Bundle of data services (a quantity of Mb)							
Bundled voice + SMS							
Bundled voice + Data Services							
Bundled SMS + Data Services							
Bundled Voice + SMS+ Data Services							
Application of domestic rates							
Connection fee + Domestic Rates							
Connection fee + other Rates							
Roaming services included in domestic bundle							
In case that other tariffs exists, please, describe in the box below							

3.2 Alternative tariffs		
	Yes	No
Are there any activation charges applied when switching between any of the tariffs?		
Do you inform customers actively about the start and end of the tariff period for tariffs limited in time?		
Also for tariffs limited in time, do you inform customers, about the tariffs/charges they have to pay for roaming services, when their alternative tariff period ends?		
Regarding bundles, do you inform customers using an alternative tariff (via SMS, website, etc.) about the charges applied for out of bundle consumption?		
Do you inform customers actively when they reach the limits included in the bundle ?		
Please, describe how do you inform customers about the issues addressed in the previous questions		

3.3 Switching between tariffs				
Where do you provide information concerning switching between tariffs ?				
	Yes	No		
Website				
Mobile terminal (e.g. via a short message)				
Call Centre				
Point of Sales				
Any other mean (please specify)				
If "Any other mean" has been marked as "Yes", please describe				
3.4. Information for customers about charges and consumption for intra-EU roaming				
	Monthly information (bill)		Real Time Information	
	Charges	Volumes	Charges	Volumes
Does the bill include separate itemized information on International Roaming intra-EEA outgoing voice calls?				
Does the bill include separate itemized information on International Roaming intra-EEA incoming calls?				
Does the bill include separate itemized information on International Roaming intra-EEA SMS sending?				
Does the bill include separate itemized information on International Roaming intra-EEA data services?				
In case you are providing itemized information for charges and/or volumes consumption, please, identify how this information is provided to				
	historical		real time	
	Yes	No	Yes	No
Bill				
Website				
Interaction via the mobile terminal (e.g. via a short message)				
Call Centre				
Specific App available for installation in the terminal				
Any other mean (please specify)				
If "Any other mean" has been marked as "Yes", please describe				
4.- Information and tools to compare tariffs for intra-EEA International Roaming				
4.1.- Tables comparing all international roaming intra-EU tariffs				
	Yes	No		
Is there available any table for customers comparing conditions and prices for all tariffs available for intra-EU international roaming in your website?		1		
If yes, please, supply the link.				
4.2.- Tools for selecting the most adequate international roaming tariff based on estimation of consumptions				
	Yes	No		
Do you provide customers with any application to help in the selection of the most adequate tariff for his/her pattern of				
If yes, please, supply the link				
4.3- Information for customers on estimating data traffic consumption				
	Yes	No		
Do you provide customers with information on how to estimate data services consumption based on the estimated use of Internet Services as web browsing, e-mails, and specific applications as Google Maps or Whatsapp?				
If yes, please, supply the link				
Where the information about the billshock measures for alternative tariffs is available				

