International Roaming Indicators

List of Proposed Indicators

a. Country-level roaming Agreements (CLRA's)
b. Retail Roaming revenues
c. Retail Roaming revenues on CLRAs
d. Retail Roaming data traffic
e. Retail Roaming data traffic on CLRA's
f. Retail roaming voice traffic (actual minutes)
g. Retail roaming voice traffic (actual minutes) on CLRAs
h. Roaming minutes - calls made (billed minutes)
i. Number of active roaming subscriptions
j. Number of active roaming subscriptions through CLRAs

Regarding the proposed Indicator: **Country-level roaming agreements (CLRA's)**

Country-level roaming agreements are defined as roaming agreements that are imposed through trans-national regulatory decisions, hence, supersede all existing commercial roaming agreements between telecom firms operating on the countries involved. The importance of country-level roaming agreements is steadily growing.

There are numerous mentions regarding the importance of country-level roaming agreements in ITU's Handbook for the Collection of Administrative Data on Telecommunications/ ICT (Draft – 11 September 2019, Document 3), notably:

p.113: "*note that in some areas of the world a specific regulatory regime exists by which the final user does not pay any extra amount of money when using voice or data service while abroad, at least for a given volume of usage, as when a regime as roam- like- at- home or a free roaming area exists. This implies that for specific consumption volumes of voice, messaging, or data while abroad the domestic operator charges the usual domestic tariff that the final subscriber contracted for the domestic country usage. For consumption levels over and above those defined as "standard use", additional (marginal) fees may be paid for each minute or MB consumed while abroad*.".

p.114: *"In some areas of the world countries have agreed to eliminate roaming charges or to implement special regimes, as roam-like-at-home with the aim of reducing barriers to communication and mobile usage when citizens of one country travel or work in another nearby country".*

p.139: *“In some areas of the world "free roaming zones" are being introduced by which roaming rates are greatly reduced or even eliminated, as in the European Union with the “Roam Like at Home” regulation since 2017.”*

p. 140: *“International roaming has received specific regulatory treatment in many areas of the world where regulations have been implemented, reducing the rates paid for this service and augmenting considerably the volumes of service demanded by the users.”*

p. 141: “*Roaming regulation in the form of caps on retail (and wholesale) prices for voice and SMS in the European Union has been in place since 2007. In 2017 the roam-like-at- home regulation in the EU came into force, which lowered to domestic rates the previously high roaming rates for making calls. The result has been clear: much higher voice calls being demanded by domestic subscribers while on travel in the European Union*”.

p.142: “*Free roaming areas are being introduced in different forms in many parts of the world*”

p.145: “*In many parts of the world "free- roaming areas" are being designed or implemented effectively, by which specific charges while on roaming have been eliminated or greatly reduced, as in the European Union, Gulf States, Mercosur countries and central Africa.”*

pp.146-147 & p. 148*: “in many areas in the world countries are reaching agreements to establish "free roaming areas", by which roaming traffic is not to be charged specifically, at normally higher rates than domestic country rates, or charges are to be lowered substantially. It is important to know the consumption patterns, be it for data, voice or messages used, of foreign subscribers while at home in order to analyze the effects and consequences of establishing a free roaming area, or when this is not the case, to analyze the evolution, unit prices, traffic flows and capacity requirements of roaming users in order to design a proper regulatory environment.”*

To this end, the indicator CLRA aims at informing the ITU whether there is in place an agreement between the answering country with another or other countries securing a free or special roaming tariff approach in relation to existing national tariffs. An example is the RLAH (roaming like at home initiative in EU). Thus, possible answers are “Yes” and “No” and the respondent must provide details on the number of CLRA’s her country participates in, in the comment section. On each other roaming relevant indicators, a subdivision exists to account for relevant CLRA data.

The main point in collecting this indicator is to inform ITU on the CLRAs the country participates in each reporting year. The actual importance of these CLRAs is demonstrated by calculating each CLRA sub-index share on each roaming relevant indicator.

Method of collection:

The data can be collected from the national regulating authority (NRA) in the country or the relevant ministry.

Relationship with other indicators:

If the NRA answers “Yes” on this indicator, relevant information is expected on all subsequent indicators aiming at reporting information on volume and on revenues concerning CLRAs. On the contrary, if the NRA answers “No” then all subsequent indicators aiming at reporting information on volume and on revenues concerning CLRAs should be left empty.

Regarding the proposed Indicator: **Retail roaming revenues**

It is rather a new name for the Indicator 64b. Revenue from outbound roaming (i76ro) in *ITU’s Handbook for the Collection of Administrative Data on Telecommunications/ ICT (Draft – 11 September 2019, Document 3*

Roaming revenues are defined as revenues deriving directly from the provision of roaming services. Any revenues from non-mobile services should be excluded. Revenues should be excluding VAT. Refers to all mobile-cellular retail roaming revenue from own subscribers roaming abroad. It does not cover foreign mobile subscribers roaming into the country and international calls originating or terminating on the country’s mobile networks. This is a retail revenue that the operator obtains from his own subscribers when making or receiving calls while in a foreign country/ network.

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The indicator refers to retail mobile-telephone revenue earned by telecommunication service providers. The indicator includes revenue from connection, subscription, call usage, messaging and data, but excludes interconnection charges and other sources of income such as those related to handsets. Data should be reported in local currency at current prices.

Method of collection:

The data can be collected from telecommunication service operators providing mobile-telephone services in the country and whose activities are included in ISIC Revision 4, Division 61 (Telecommunications), and then aggregated at the country level. Data for small providers (e.g. resellers and mobile virtual network operators) may be collected directly from their host network operators. Data are aggregated at the country level. An alternative source for revenue data could be industry surveys carried out by the national statistical office, or other reputable organization.

Relationship with other indicators:

This indicator is a sub-indicator/component of Indicator 64 and, therefore, a component/sub-indicator and of Indicator 59 (Revenue from all telecommunication services).

Regarding the proposed Indicator: **Retail roaming revenues from CLRAs**

It is a sub-indicator of the previous indicator concerning only outbound roaming revenues attributed exclusively to CLRA's.

Example:

Retail roaming revenues in Greece versus revenues from retail voice and data services (M Euros)

	2015	2016	2017	2018	2019
Retail Revenues	1677	1628	1634	1659	1729
Retail Roaming Revenues	49	37	34	30	30
Retail Roaming Revenues on CLRAs			15.	23	23

Regarding the proposed Indicator: **Retail roaming data traffic**

It is rather a new name for the *Mobile broadband internet traffic outside the country- roaming out (136mwo)* in *ITU's Handbook for the Collection of Administrative Data on Telecommunications/ ICT (Draft – 11 September 2019, Document 3).*

It refers to data generated by own customers in foreign networks through roaming. Hence it refers to broadband traffic volumes originated outside the country from 3G, 4G/LTE, 5G networks or other more advanced mobile- networks, including evolutions or equivalent standards in terms of data transmission speeds. Traffic should be collected and aggregated at the country level for all customers of domestic operators roaming outside the country.

Traffic should be reported in Gigabytes. Download and upload traffic should be added up and reported together. Traffic should be measured at the end- user access point. Wholesale and walled-garden traffic should be excluded.
The growth rates of mobile broadband usage (data) is significantly higher than the growth rate of voice calls and data- roaming has become a very relevant service for citizens while traveling.

Methodological issues:
Retail (Outbound) data roaming is a retail level service and transaction, i.e., it affects the domestic operator and the domestic subscriber in that he/she accesses the internet while visiting a foreign country and shall be charged directly by its service provider for this service. Even if the service itself, the accessing to internet, is provided by a foreign company, the charges to be paid are defined by his/her own domestic service provider. It is retail level traffic, since it is generated and billed to the final consumer (even if it has a corresponding wholesale transaction occurring among operators).

Method of collection:
Data should be collected from mobile operators, since they are the ones to bill the customer and make the corresponding roaming agreements with other operators around the world in ordeer to make the international communication, i.e., data use, possible.

Regarding the proposed Indicator: **Retail roaming data traffic from CLRAs**

It is a sub-indicator of the previous indicator concerning only outbound roaming data traffic attributed exclusively to CLRA's.

Example:

Retail roaming data traffic in Greece versus traffic from retail data services (GB)

	2015	2016	2017	2018	2019
Data traffic	36.056.409	47.087.271	97.876.012	147.573.359	271.578.920
Data traffic from roaming	31.560	178.585	776.137	2.174.174	4.061.761
Data traffic from roaming on CLRAs			353.142	1.695.856	3.208.791

Regarding the proposed Indicator: **Retail roaming voice traffic (actual minutes)**

It is rather a new name for the Indicator 32: Roaming by home subscribers abroad (outbound roaming), in minutes (i1334wm) in ITU's Handbook for the Collection of Administrative Data on Telecommunications/ ICT (Draft – 11 September 2019, Document 3).

It refers to the number of actual roaming minutes consumed by subscribers (residential and business). This means the number of minutes used for the duration of a call as recorded in the CDR. Hence the proposed indicator refers to the total call minutes made and received by own customers in foreign networks (outbound roaming), i.e. retail international roaming minutes from own network subscribers roaming on foreign networks abroad. The indicator excludes minutes from users who are not subscribers to domestic mobile networks and are temporarily roaming on domestic mobile networks. Traffic should be reported in Minutes.
This indicator refers to the international roaming traffic of domestic mobile subscriptions, in minutes. It is the traffic that customers generate when they are using their mobile phones abroad. It does not refer to international traffic originating on mobile networks in the country, nor to foreign mobile subscribers generating roaming traffic in the country to which the data pertain. Any deviations from the definition (e.g. a different treatment of roaming traffic) should be specified in a note.

Method of collection:
The data can be obtained from mobile-telephone operators in the country, and then aggregated at the country level.

Methodological issues:
Some countries may only report roaming traffic that is returned to the country, or calls placed within the country to mobile subscribers who are roaming abroad, or some other variation.

Regarding the proposed Indicator: **Retail roaming voice traffic (actual minutes) on CLRAs**

It is a sub-indicator of the previous indicator concerning only outbound actual roaming voice traffic attributed exclusively to CLRAs.

Regarding the proposed Indicator: **Retail roaming voice traffic (billed minutes)**

There are cases where operators bill their customers not based on their actual voice generated traffic but based on a slightly different pricing scheme, involving billing constructs such as minimum call duration, per minute charge to destinations, minimum call charge etc. In that case, there is a difference between the actual and the billed voice traffic. This indicator aims at collecting the billed voice traffic if different than the

actual voice traffic. Apart from the difference mentioned above, there are no other differences in definition, method of collection and methodologically between the actual and billed voice traffic in minutes. It is expected that the billed roaming voice traffic to be equal or greater to actual roaming voice traffic.

Regarding the proposed Indicator: **Retail roaming voice traffic (billed minutes) on CLRAs**

It is a sub-indicator of the previous indicator concerning only outbound billed roaming voice traffic attributed exclusively to CLRAs.

Example:

Retail roaming voice traffic in Greece versus traffic from retail voice services (M Minutes)

	2015	2016	2017	2018	2019
Voice traffic (actual minutes)	27.211	26.793	27.454	28.063	29.070
Voice traffic (billed minutes)	26.196	26.906	27.624	28.627	30.285
Voice traffic from roaming (actual minutes)	154	166	277	517	588
Voice traffic from roaming (billed minutes)	159	172	285	528	600
Voice traffic from roaming (actual minutes) on CLRAs			126	404	458
Voice traffic from roaming (billed minutes) on CLRAs			130	412	468

Regarding the proposed Indicator: **Number of active roaming subscriptions**

It refers to the number of Mobile-cellular telephone subscriptions (residential and business) that used roaming services at least once in the reporting period, i.e. in the previous year. If a user roams twice within the same period, it is only counted as once.

There is no distinction as to the type of mobile cellular subscriptions concerned in this indicator. Voice only, data only, voice and data subscriptions as well as active prepaid accounts[1] and

[1] Active prepaid accounts are prepaid accounts that have been used during the last three months

postpaid subscriptions should be reported if they used roaming services at least once in the reporting period[2].

Method of collection:

Data can be collected from all licensed mobile-cellular operators in the country, i.e. operators that offer that offer mobile voice or/and broadband services providing access to the Internet and then aggregated at the country level. If retail mobile-cellular services are also provided by non-facilities-based operators (i.e. mobile virtual network operators), care should be taken to avoid double counting. One difficulty that may arise is that operators may have different definitions of 'active' and therefore may not be able to provide the data according to the recommended definition (i.e. used in the last three months).

Methodological issues:

This indicator refers to mobile-cellular subscriptions. Hence it refers to voice and data subscriptions to networks using mobile-cellular technology. It includes both postpaid and prepaid subscriptions. It includes mobile-cellular telephone subscriptions with access to data communications at low and medium speeds, mobile-cellular subscriptions with access to data communications at broadband speeds and mobile data-only subscriptions. It excludes trunked radio and radio-paging machine subscriptions. Both residential and business subscriptions should be included. Comparability may be affected if countries do not adhere to the requirement that subscriptions should be active in the last three months.

Since the indicator refers to subscriptions, it does not represent the number of users.

Regarding the proposed Indicator: **Number of active roaming subscriptions on CLRAs**

It is a sub-indicator of the previous indicator concerning only the active roaming subscriptions that used roaming services exclusively through CLRAs.

[2] There are different types of mobile cellular subscriptions. The two most demanded services by final users are voice and data connectivity. Voice services are possible with any of the existing standards for mobile networks: 2G, 3G, 4G and most recently 5G. Messages (SMS, MMS) over the traditional networks are provided commercially together with the voice plan, even if in some instances they are charged separately.
Data connectivity is as well possible with any of the standards mentioned but broadband (i.e., a connection that allows the user to connect at a speed of at least 256 Kbps) is possible only with 3G or higher standards (4G/LTE and 5G). Hence, when considering mobile broadband in practice it means connections that use 3G or later networks.
Broadband services supported by mobile networks may be contracted in two ways: (1) either together with a voice plan (possibly also including messaging), or (2) as a stand-alone service: only broadband, via a dongle/ modem/ USB key card or with a device such as a smartphone or tablet. In order to differentiate between types of contracts ITU collects data on subscriptions distinguishing between data *and* voice subscriptions, or only data subscriptions. Both services can be contracted through either prepayment or post payment.