



International Roaming

Proposed Indicators

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Outline

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Terms of Reference (ToR)



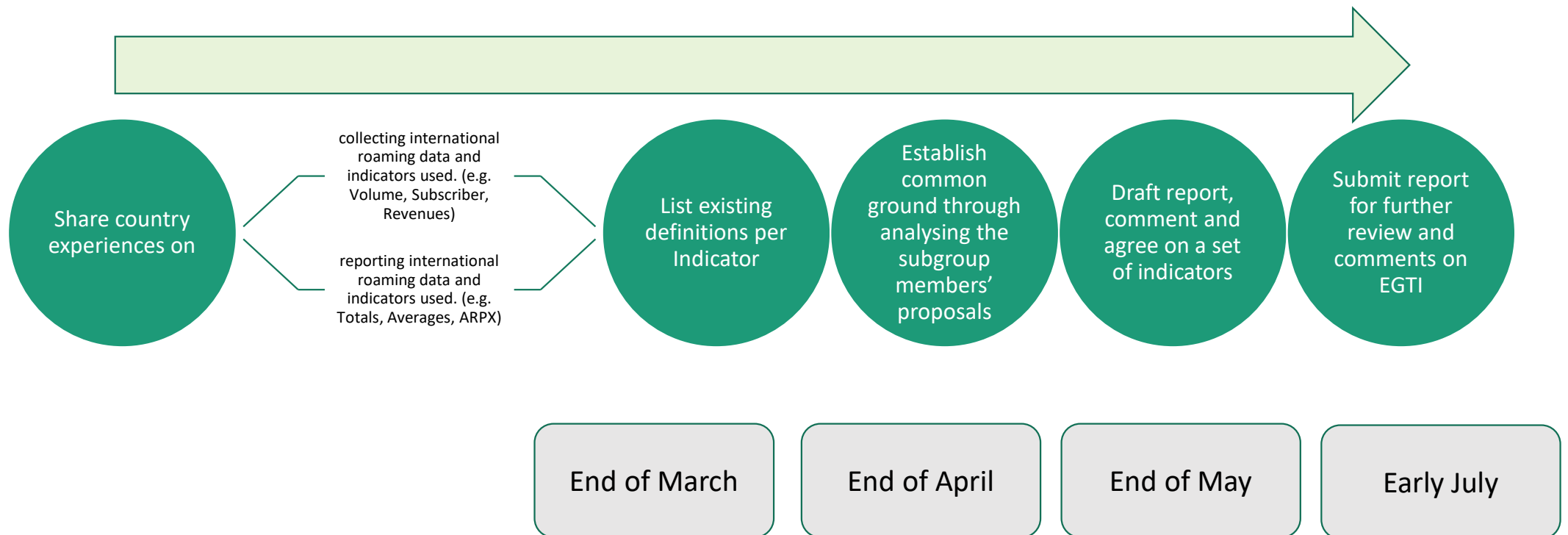
- During the last meeting of the ITU Expert Group on Telecommunication / ICT Indicators, EGTI agreed to create a sub-group on international roaming (IR) indicators, such as on data traffic and prices, to study the practices in different countries and prepare a proposal to be presented in the next EGTI meeting.
- The sub-group was expected to propose a harmonized definition for a set of indicators on international roaming services, accompanied by a detailed description of a proposed measurement approach, which draws from current practices, that is broadly applicable to diverse countries.

Subgroup Members



Country	Name	organization
GRC	Giannis Tsiamis	Hellenic Telecommunications & Post Commission (EETT)
LKA	A S W Bandusiri Silva	Telecommunications Regulatory Commission
TUN	Nasreddine Bahri	INTT
MAR	Fatima Azzahra berrady	ANRT
OMA	Raya Al-Busaidi	TRA Oman
(MYS)	Hock Eng Koay	
UAE	Hussien El Ajab	TRA
CRI	Cinthyia Arias	SUTEL
ITA	Silvio de Nicola	AGCOM
KEN	Carolyne Kakemu	Communication Authority of Kenya
ROM	Bogdan Vasilescu	ANCOM
EU	Balazs Zorenyi	European Commission
SAU	Mansour AlShehry	SITC
ZMB	Bernard Banda	ZICTA
PRT	Joao Noronha	ANACOM

Workflow





Indicator Sources

Subscribers, Traffic, Prices-Surcharges, Revenues on

- Inbound and outbound voice calls
- Inbound and outbound SMS
- Data (e.g., MMS, email, mobile browsing, mobile TV)
- Other ? (e.g. Voicemail, M2M, IoT)

Collection Period

- Annually
- Semi-annually

Breakdowns on

- Special Economic Zones
- Other
- MNO's vs MVNO's
- Pricing Schemes e.g. per unit pricing, per period pricing



List of Proposed Indicators

Country-level roaming Agreements (CLRA's)

Retail Roaming revenues

Retail Roaming revenues on CLRAs

Retail Roaming data traffic

Retail Roaming data traffic on CLRA's

Retail roaming voice traffic (actual minutes)

Retail roaming voice traffic (actual minutes) on CLRAs

Retail roaming voice traffic(billed minutes)

Number of active roaming subscriptions

Number of active roaming subscriptions through CLRAs

Thus, essentially, there are 2 set of indicators: Those that focus on the total roaming market and those that focus solely on CLRA's. The latter constitute a subset of the first.

The first set comprises 5 indicators and the second 4 indicators.

Country-level roaming Agreements (CLRA's)

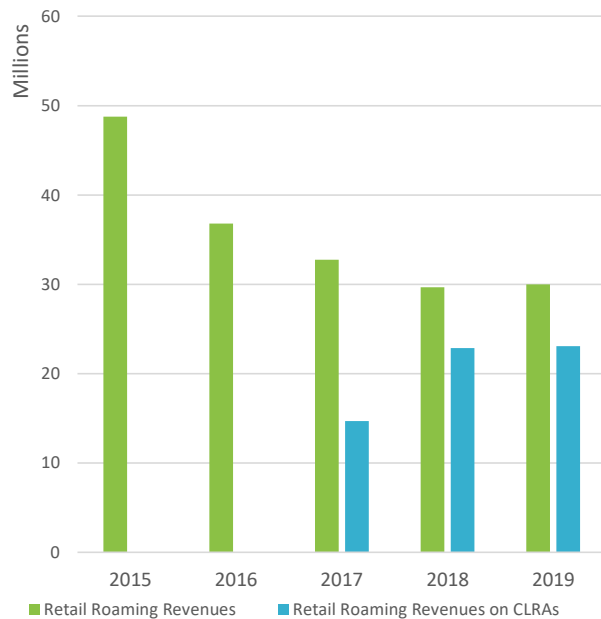
- These are defined as roaming agreements that are imposed through trans-national regulatory decisions, hence, supersede all existing commercial roaming agreements between telecom firms operating on the countries involved. The importance of country-level roaming agreements is steadily growing.
- There are at least 9 mentions of this phenomenon in ITU's Handbook for the Collection of Administrative Data on Telecommunications/ ICT (Draft – 11 September 2019, Document 3)
- 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 special roaming tariff approach in relation to existing national tariffs. An example is the RLAH (roaming like at home initiative in EU).
- A major point in collecting information regarding traffic, revenues, while discriminating on the CLRA's share, is to examine the significance of CLRA's in the total international roaming market.

The EU/BEREC Experience

a) Retail Volumes for mobile service	
Minutes Voice Calls (units)	
2.1.1	Retail Domestic Minutes - calls made (actual minutes)
2.1.2	Retail Domestic Minutes - calls received (actual minutes)
2.1.3	Retail intra-EU/EEA Roaming Voice Minutes from RLAH - calls made (actual minutes)
2.1.4	Retail intra-EU/EEA Roaming Voice Minutes from RLAH - calls received (actual minutes)
2.1.5	Retail intra-EU/EEA Roaming Voice Minutes from RLAH+ (for not providing the stable link) - calls made (actual minutes)
2.1.6	Retail intra-EU/EEA Roaming Voice Minutes from RLAH+ (for not providing the stable link) - calls received (actual minutes)
2.1.7	Retail intra-EU/EEA Roaming Voice Minutes from RLAH+ (derogation) - calls made (actual minutes)
2.1.8	Retail intra-EU/EEA Roaming Voice Minutes from RLAH+ (derogation) - calls received (actual minutes)
2.1.9	Retail intra-EU/EEA Roaming Voice Minutes from RLAH+ (non compliance from abusive or anomalous usage) - calls made (actual minutes)
2.1.10	Retail intra-EU/EEA Roaming Voice Minutes from RLAH+ (non compliance from abusive or anomalous usage) - calls received (actual minutes)
2.1.11	Retail intra-EU/EEA Roaming Voice Minutes from alternative tariffs - calls made (actual minutes)
2.1.12	Retail intra-EU/EEA Roaming Voice Minutes from alternative tariffs - calls received (actual minutes)
2.1.13	Rest of world roaming minutes - calls made (actual minutes)
2.1.14	Rest of world roaming minutes - calls made (billed minutes)
2.1.15	Rest of world roaming minutes - calls received (actual minutes)
2.1.16	Rest of world roaming minutes - calls received (billed minutes)
2.1.17	Total retail roaming voice minutes EU/EEA - calls made (sum of 2.1.3, 2.1.5, 2.1.7, 2.1.9 and 2.1.11)
2.1.18	Total retail roaming voice minutes EU/EEA - calls received (sum of 2.1.4, 2.1.6, 2.1.8, 2.1.10 and 2.1.12)
2.1.19	IN-GROUP retail roaming voice minutes EU/EEA - calls made
2.1.20	IN-GROUP retail roaming voice minutes EU/EEA - calls received
SMS Volumes (units of SMS)	
2.2.1	Domestic retail SMS messages
2.2.2	Retail intra-EU/EEA roaming SMS messages from RLAH tariffs
2.2.3	Retail intra-EU/EEA roaming SMS messages from RLAH+ tariffs (for not providing the stable link)
2.2.4	Retail intra-EU/EEA roaming SMS messages from RLAH+ tariffs (derogation)
2.2.5	Retail intra-EU/EEA roaming SMS messages from RLAH+ tariffs (non compliance from abusive or anomalous usage)
2.2.6	Retail intra-EU/EEA roaming SMS messages from alternative tariffs
2.2.7	Rest of world retail SMS messages
2.2.8	Total retail roaming SMS messages EU/EEA (sum of 2.2.2, 2.2.3, 2.2.4, 2.2.5 and 2.2.6)
2.2.9	IN-GROUP retail roaming SMS messages EU/EEA
Data Volumes in GB units	
2.3.1	Domestic retail data volumes
2.3.2	Retail intra-EU/EEA roaming data volumes from RLAH tariffs
2.3.3	Retail intra-EU/EEA roaming data volumes from RLAH+ tariffs (non compliance from stable links)
2.3.4	Retail intra-EU/EEA roaming data volumes from RLAH+ (derogation)
2.3.5	Retail intra-EU/EEA roaming data volumes from RLAH+ tariffs (exceeding FUP for data)
2.3.6	Retail intra-EU/EEA roaming data volumes from RLAH+ tariffs (non compliance from abusive or anomalous usage)
2.3.7	Retail intra-EU/EEA roaming data volumes from alternative tariffs
2.3.8	Rest of world retail roaming data volumes
2.3.9	Total retail roaming data volumes EU/EEA (sum of 2.3.2, 2.3.3, 2.3.4, 2.3.5, 2.3.6 and 2.3.7)
2.3.10	IN-GROUP retail roaming data volumes EU/EEA

- This is an analytical list regarding international roaming collected from EU concerning solely the volume (minutes, SMS and data) in the EU –wide CLRA known as RLAH

Retail Roaming Revenues (total and on CLRA's)

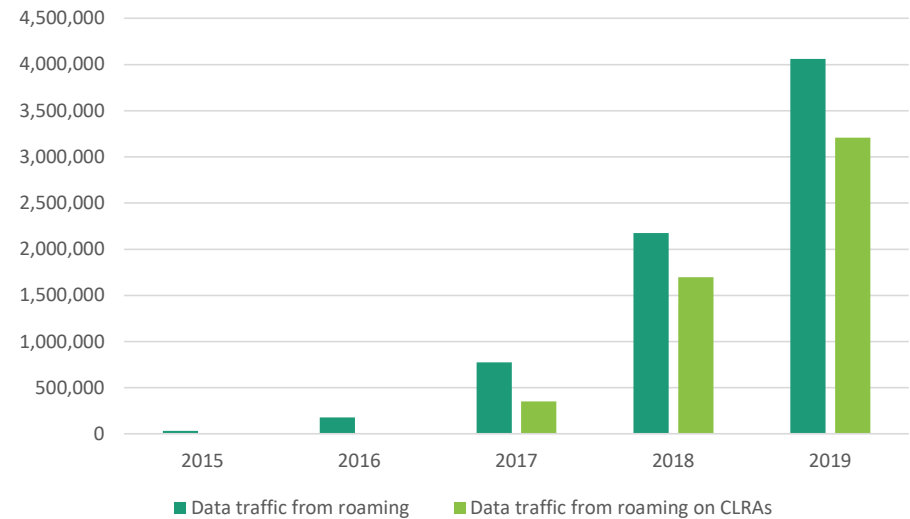


- Roaming revenues are defined as revenues deriving directly from the provision of roaming services. Any revenues from non-mobile services should be excluded. Revenues should be excluding VAT. Refers to all mobile-cellular retail roaming revenue from own subscribers roaming abroad. It does not cover 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.
- This stream of revenues is composed of: (1) outbound roaming revenues from voice services, (2) outbound roaming revenues from messaging services and (3) outbound roaming revenues derived from broadband (data) consumption while abroad.
- CLRA sub-indicator

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

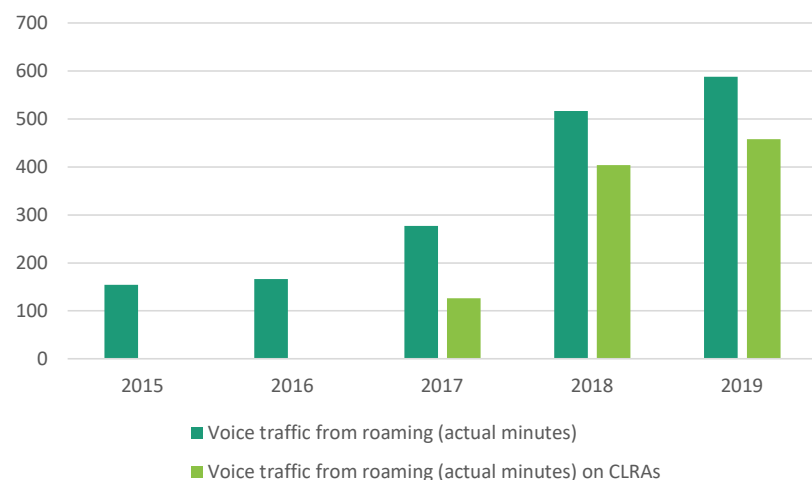
Retail roaming data traffic (total and on CLRA's only)

- 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.
- 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.
- CLRA sub-indicator



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

Retail Roaming voice traffic (total and on CLRA's only)



M Minutes	2015	2016	2017	2018	2019
Voice traffic	27.211	26.793	27.454	28.063	29.070
Voice traffic from roaming	154	166	277	517	588
Voice traffic from on CLRAs			126	404	458

- 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.
- 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. In Greece, this figure generates a difference of 2%-3,6% when measuring billed minutes instead of actual minutes.
- CLRA sub-indicator

Number of active roaming subscriptions (total and CLRA's only)



- 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 and postpaid subscriptions should be reported if they used roaming services at least once in the reporting period. Active prepaid accounts are prepaid accounts that have been used during the last three months.

Collection



- Data can be collected from telecommunication operators (telcos) by national regulatory authorities and ministries. Telcos represent the most spread and reliable source of data for this indicator, since they can provide direct measurement.
- Data are aggregated at the country level.

Way Forward



1. Are there other indicators that should be considered?

The focus lied on the retail side based on the ITU mandate

2. Are there indicators that should be dropped?

For example, we could examine the potential exclusion of the subscription indicators and the one of the billed minutes.

3. Are there indicators that should be merged?

For example there is a formula to accommodate minutes into MB

4. Are there trans-national agreements/practices that are not taken account of on the proposed indicators?

Suggestions?

Thank you for your attention

Dr. Giannis Tsiamis