



EUROPEAN UNION

THE EUROPEAN PARLIAMENT

THE COUNCIL

**Brussels, 28 March 2022
(OR. en)**

2021/0045 (COD)

PE-CONS 86/21

**TELECOM 464
COMPET 914
MI 949
CONSOM 295
CODEC 1659**

LEGISLATIVE ACTS AND OTHER INSTRUMENTS

Subject: REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE
COUNCIL on roaming on public mobile communications networks within
the Union (recast)

REGULATION (EU) 2022/...
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of...

on roaming on public mobile communications networks within the Union (recast)

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee¹,

After consulting the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure²,

¹ OJ C 374, 16.9.2021, p. 28.

² Position of the European Parliament of 24 March 2022 (not yet published in the Official Journal) and decision of the Council of

Whereas:

- (1) Regulation (EU) No 531/2012 of the European Parliament and of the Council¹ has been substantially amended several times². Since further amendments are to be made, that Regulation should be recast in the interests of clarity.

¹ Regulation (EU) No 531/2012 of the European Parliament and of the Council of 13 June 2012 on roaming on public mobile communications networks within the Union (OJ L 172, 30.6.2012, p. 10).

² See Annex I.

- (2) In particular, Regulation (EU) 2015/2120 of the European Parliament and of the Council¹ amended Regulation (EU) No 531/2012 and required retail roaming surcharges to be abolished in the Union from 15 June 2017, subject to the fair usage of roaming services and the possibility of applying a derogation mechanism for the sustainability of the abolition of retail roaming surcharges, also referred to as ‘roam-like-at-home’ (RLAH). In addition, the Commission undertook a review of the wholesale roaming market with a view to assessing measures necessary to enable the abolition of retail roaming surcharges in accordance with Article 19 of Regulation (EU) No 531/2012. Following that review, Regulation (EU) 2017/920 of the European Parliament and of the Council² was adopted with the aim of regulating national wholesale roaming markets in order to abolish retail roaming surcharges by 15 June 2017 without distorting the domestic or the visited markets.

¹ Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users’ rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union (OJ L 310, 26.11.2015, p. 1).

² Regulation (EU) 2017/920 of the European Parliament and of the Council of 17 May 2017 amending Regulation (EU) No 531/2012 as regards rules for wholesale roaming markets (OJ L 147, 9.6.2017, p. 1).

- (3) On 29 November 2019, the Commission published its first full review of the roaming market (the ‘Commission Report’), showing that travellers across the Union have benefited significantly from the abolition of retail roaming surcharges. The use of mobile services, namely regulated voice, SMS or data roaming services, while travelling in the Union has increased rapidly and massively, confirming the impact of the Union’s roaming rules. The Commission Report concluded that, despite signs of some competition dynamics in both the retail and wholesale roaming markets, the underlying basic competition conditions have not changed and are not likely to change in the foreseeable future. The regulation of the retail and wholesale markets therefore remains necessary and should not be abandoned. In particular, the Commission Report found that, at the wholesale level, the sharp reduction in price caps has contributed to a further reduction in wholesale roaming prices, which has benefited net outbunder operators, that is, operators with a customer base that consumes more mobile services on the networks of partner operators in other Member States than those consumed by the partner operators’ customer base on its own network.

The Commission Report took note of the recommendation of the Body of European Regulators for Electronic Communications (BEREC) to further lower wholesale roaming price caps. The Commission also analysed and documented the need to further lower wholesale roaming price caps and assessed the level of reduction that enables visited operators to recover the costs of providing wholesale roaming services. The Commission Report referred to the requirement of Regulation (EU) No 531/2012 that roaming customers have access to the same services in other Member States, for the same price, provided that those services can be delivered on the visited network. The Commission Report took note of the very recent development of new ways of trading wholesale roaming traffic, such as online trading platforms that have the potential to foster competition on the wholesale roaming market and facilitate negotiation between operators. Finally, it observed that the separate sale of data roaming services has not been taken up by the market.

- (4) Regulation (EU) No 531/2012 expires on 30 June 2022 and the aim of this Regulation is to recast it while introducing new measures to increase transparency, including transparency with regard to the use of value-added services while roaming and the use of roaming on non-terrestrial public mobile communications networks, and to ensure a genuine RLAH experience in terms of quality of service and access to emergency services while roaming. The validity of this Regulation is set for 10 years, until 2032, in order to provide certainty in the market and minimise regulatory burdens. This Regulation introduces a requirement that the Commission carry out reviews and submit reports to the European Parliament and to the Council in 2025 and 2029, followed, if appropriate, by a legislative proposal to amend this Regulation, where market developments so require. Because of rapid market developments and the rapid roll-out of new technologies, the Commission should assess, in particular, whether it is appropriate to make a legislative proposal to amend this Regulation when issuing its first report in 2025.
- (5) The national regulatory authorities or other competent authorities that are responsible for safeguarding and promoting the interests of mobile customers who normally reside within their territory are not able to control the behaviour of the visited network operators situated in other Member States on whom those customers depend when using international roaming services. That lack of control could diminish the effectiveness of measures taken by Member States based on their residual competence to adopt consumer protection rules.

- (6) The mobile communications market remains fragmented in the Union, with no mobile network covering all Member States. As a consequence, in order to provide mobile communications services to their domestic customers travelling in other Member States, roaming providers purchase wholesale roaming services from, or exchange wholesale roaming services with, operators in visited Member States.
- (7) An internal telecommunications market cannot be said to exist while there are differences between domestic and roaming prices. Therefore, differences between domestic charges and roaming charges should be eliminated in order to establish an internal market for mobile communication services.
- (8) A common, harmonised approach should be employed to ensure that users of terrestrial public mobile communications networks when travelling within the Union do not pay excessive prices for Union-wide roaming services, thereby enhancing competition concerning roaming services between roaming providers, achieving a high level of consumer protection and preserving both incentives for innovation and consumer choice. In view of the cross-border nature of the services concerned, such a common approach is needed to ensure that roaming providers can operate within a single coherent regulatory framework, based on objectively established criteria.

- (9) The widespread use of internet-enabled mobile devices means that data roaming is of great economic significance. This is relevant for both users and providers of applications and content. In order to stimulate the development of this market, charges for data transport should not impede growth, in particular considering that the development and deployment of next generation, high-speed networks and services are expected to accelerate steadily.

- (10) Directives 2002/19/EC¹, 2002/20/EC², 2002/21/EC³, 2002/22/EC⁴ and 2002/58/EC⁵ of the European Parliament and of the Council aimed to create an internal market for electronic communications within the Union, while ensuring a high level of consumer protection through enhanced competition. With the exception of Directive 2002/58/EC, those Directives were repealed by Directive (EU) 2018/1972 of the European Parliament and of the Council⁶.

¹ Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive) (OJ L 108, 24.4.2002, p. 7).

² Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive) (OJ L 108, 24.4.2002, p. 21).

³ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) (OJ L 108, 24.4.2002, p. 33).

⁴ Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) (OJ L 108, 24.4.2002, p. 51).

⁵ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications) (OJ L 201, 31.7.2002, p. 37).

⁶ Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (OJ L 321, 17.12.2018, p. 36).

Directive (EU) 2018/1972 aims to stimulate investment in and take-up of very high capacity networks in the Union as well as to set new spectrum rules for mobile connectivity and 5G. Directive (EU) 2018/1972 also provides for national regulatory authorities and other competent authorities, as well as BEREC, the Commission and the Member States, to pursue, *inter alia*, the objectives of contributing to the development of the internal market and promoting the interests of the citizens of the Union. That Directive ensures, *inter alia*, that all end-users have access to affordable communication, including the internet. It increases consumer protection and security for users, and facilitates regulatory intervention.

- (11) The retail and wholesale roaming markets exhibit unique characteristics which justify exceptional measures which go beyond the mechanisms otherwise available under Directive (EU) 2018/1972.
- (12) This Regulation should allow for a departure from the rules otherwise applicable under Directive (EU) 2018/1972, namely that prices for service offerings are to be determined by commercial agreement in the absence of significant market power, thereby accommodating the introduction of complementary regulatory obligations which reflect the specific characteristics of Union-wide roaming services.

- (13) To protect roaming customers against increasing retail prices for regulated roaming services, namely regulated voice, SMS or data roaming services, due to fluctuations in the reference exchange rate of currencies other than the euro, a Member State whose currency is not the euro should use an average of several reference exchange rates over time to determine the maximum applicable surcharges in its currency. Where maximum charges are not denominated in euro, the applicable values should be determined in the relevant currency by applying the average of several reference exchange rates over time published in the *Official Journal of the European Union* (Official Journal) on the date specified in this Regulation. Where there is no publication on the date specified, the applicable reference exchange rates should be those published in the first Official Journal following that date and containing such reference exchange rates. To align the determination of values in currencies other than the euro with the rule applied to intra-EU communications in accordance with Regulation (EU) 2015/2120, the maximum charges in currencies other than the euro should be determined by applying the average of the reference exchange rates published by the European Central Bank on 15 January, 15 February and 15 March of the relevant calendar year in the Official Journal. Maximum charges calculated in this way for 2022 should apply from the date of entry into force of this Regulation until 15 May 2023.

- (14) In order to allow for the development of a more efficient, integrated and competitive market for roaming services, there should be no restrictions that prevent undertakings from effectively negotiating wholesale access for the purpose of providing roaming services, including for machine-to-machine communications. Obstacles to access to such wholesale roaming services due to differences in negotiating power and in the degree of infrastructure ownership of undertakings should be removed. To that end, wholesale roaming agreements should respect the principle of technology neutrality and ensure that all operators have an equal and fair opportunity to access all available networks and technologies and should respect the principle that such agreements be negotiated in good faith to allow roaming providers to offer retail roaming services equivalent to the services they offer domestically. This Regulation does not impose an obligation on roaming providers to conclude wholesale roaming agreements only with those operators that have the most advanced networks, subject to compliance with the retail quality of service requirements laid down in this Regulation. The operators seeking wholesale roaming access should have the freedom to negotiate their wholesale roaming agreements according to their own commercial needs and the best interests of their end-users. Therefore, in the course of making the transition towards next generation mobile communications networks and technologies, roaming providers should gradually ensure wholesale roaming access that enables the provision of retail roaming services in other Member States under equivalent contractual conditions as in their home Member State, in accordance with the objectives of RLAH. Roaming providers should offer retail roaming services that are equivalent to mobile communication services that they offer domestically where there is widespread coverage or when there are competitive offers for access to such next generation mobile communications networks and technologies in the visited Member State, in accordance with the BEREC guidelines for wholesale roaming access.

Mobile virtual network operators (MVNOs) and resellers of mobile communication services without their own network infrastructure typically provide roaming services based on commercial wholesale roaming agreements with their host mobile network operators in the same Member State. Commercial negotiations, however, may not leave enough margin to MVNOs and resellers for stimulating competition through lower prices. The removal of those obstacles and balancing the bargaining power between MVNOs or resellers and mobile network operators by an access obligation and wholesale caps should facilitate the development of alternative, innovative and Union-wide roaming services and offers for customers. Directive (EU) 2018/1972 does not provide for a solution to this problem via the imposition of obligations on operators with significant market power.

- (15) An obligation to meet reasonable requests for wholesale access to public mobile communications networks for the purpose of providing roaming services should therefore be provided for. Such access should be in line with the needs of those seeking access. End-users of services requiring modern technologies and retail roaming services should be able to enjoy the same quality of service when roaming as they do domestically. A wholesale roaming access obligation should therefore ensure that access seekers can replicate the retail services offered domestically, unless visited network operators that are requested to provide access can prove that it is technically unfeasible to do so. The parameters under which mobile services are offered by the visited network operator to its own domestic customers are understood to be technically feasible. Subject to the relevant wholesale roaming agreement and without prejudice to the retail obligations laid down in this Regulation, the visited network operator should ensure that roaming customers on its network are not subject to conditions that are less advantageous than those it offers to its domestic customers, for example in terms of quality of service, such as the available speed. Access should be refused only on the basis of objective criteria, such as technical feasibility and the need to maintain network integrity.

The visited network operator should not refuse or limit access on the basis of commercial considerations in such a way that the provision of competing roaming services is restricted. Where access is refused, the aggrieved party should be able to submit the case for dispute resolution in accordance with the procedure set out in this Regulation. In order to ensure a level playing field, wholesale access for the purpose of providing roaming services should be granted in accordance with the regulatory obligations laid down in this Regulation applicable at the wholesale level and should take into account the different cost elements necessary for the provision of such access. A consistent regulatory approach to the wholesale access for the provision of roaming services should contribute to avoiding distortions between Member States. BEREC should, in coordination with the Commission and in collaboration with the relevant stakeholders, issue guidelines for wholesale access for the purpose of providing roaming services.

- (16) A wholesale roaming access obligation should include the provision of direct wholesale roaming services as well as the provision of roaming services on a wholesale basis for resale by third parties. The wholesale roaming access obligation should also cover the mobile network operator's obligation to enable MVNOs and resellers to purchase regulated wholesale roaming services from wholesale aggregators which provide a single point of access and a standardised platform to roaming agreements all over the Union. In order to ensure that operators provide access to all facilities necessary for direct wholesale roaming access and wholesale roaming resale access to roaming providers within a reasonable period of time, a reference offer should be published containing the standard conditions for direct wholesale roaming access and wholesale roaming resale access. The publication of the reference offer should not prevent commercial negotiations between access seeker and access provider on the price level of the final wholesale agreement or on additional wholesale access services that go beyond those necessary for direct wholesale roaming access and wholesale roaming resale access.
- (17) A wholesale roaming access obligation should cover access to all the components necessary to enable the provision of roaming services, such as network elements and associated facilities; relevant software systems including operational support systems; information systems or databases for pre-ordering, provisioning, ordering, maintaining and repair requests, and billing; number translation or systems offering equivalent functionality; mobile networks and virtual network services.

- (18) If access seekers for wholesale roaming resale request access to facilities or services in addition to what is necessary for the provision of retail roaming services, mobile network operators may recover fair and reasonable charges for those facilities or services. Those additional facilities or services could, inter alia, be value-added services, additional software and information systems or billing arrangements.

(19) Article 109 of Directive (EU) 2018/1972 requires Member States to ensure that all end-users have access to emergency services, free of charge, through emergency communications to the most appropriate public safety answering point (PSAP). That Directive also requires Member States to ensure that access by end-users with disabilities to emergency services is available through emergency communications, including when travelling within the Union, and that such access is equivalent to that enjoyed by other end-users. Those means of access could include a real time text service or total conversation service as provided for by Directive (EU) 2019/882 of the European Parliament and of the Council¹ or other non-voice communications services, such as SMS, messaging or video services through emergency applications, or relay services, which Member States deploy taking into account the requirements laid down in Union law and the capabilities and technical equipment of the national PSAP system. The implementation of the means of access to emergency services available to roaming customers with disabilities and the delivery of caller location information should be based to the greatest extent possible on European standards or specifications. Such standards should be promoted by the Commission and Member States in cooperation with European standardisation bodies and other relevant bodies.

¹ Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (OJ L 151, 7.6.2019, p. 70).

It is for the Member States to determine the type of emergency communications that are technically feasible for ensuring roaming customers' access to emergency services. In order to ensure that roaming customers have access to emergency communications under the conditions laid down in Article 109 of Directive (EU) 2018/1972, visited network operators should include in the reference offer information about what type of emergency communications are mandated and technically feasible for ensuring access for roaming customers under national measures in the visited Member State. In addition, wholesale roaming agreements should include information on the technical parameters for ensuring access to emergency services, including by roaming customers with disabilities, as well as for ensuring the transmission of caller location information, including handset-derived information, to the most appropriate PSAP in the visited Member State. Such information should allow the roaming provider to identify and provide the emergency communication and the transmission of caller location free of charge.

- (20) Certain conditions may be included in the reference offers in order to allow mobile network operators to prevent permanent roaming or anomalous or abusive use of wholesale roaming access. In particular, where the visited network operator has reasonable grounds for considering that permanent roaming by a significant share of the roaming provider's customers or anomalous or abusive use of wholesale roaming access is taking place, it should be able to require the roaming provider to provide, in an aggregated manner and in full compliance with Union and national data protection requirements, information allowing the determination of whether a significant share of the roaming provider's customers is in a situation of permanent roaming or whether there is anomalous or abusive use of wholesale roaming access, such as information on the share of customers with insignificant domestic consumption compared to the roaming consumption. Moreover, termination of wholesale roaming agreements with a view to preventing permanent roaming or anomalous or abusive use of wholesale roaming access should be effected only where less stringent measures have failed to address the situation. Such termination should be subject to prior authorisation by the national regulatory authority of the visited network operator, taking the utmost account of the opinion of BEREC where it has been consulted.

Less stringent measures could consist of setting higher wholesale charges not exceeding the maximum wholesale charges provided for in this Regulation for volumes exceeding an aggregated volume specified in the agreement. Such higher wholesale charges should be set in advance, or from the moment when the visited network operator has established and informed the home network operator that, based on objective criteria, permanent roaming by a significant share of the roaming provider's customers or anomalous or abusive use of wholesale roaming access is taking place. Less stringent measures could also consist of a commitment by the home network operator to adopt or revise the fair use policies applicable to its customers in accordance with the implementing acts adopted pursuant to this Regulation, or the possibility for the visited network operator to request that the wholesale roaming agreement be revised. In the interests of transparency, the national regulatory authority should make information concerning requests for authorisation to terminate wholesale roaming agreements available to the public, subject to business confidentiality.

- (21) In order to allow for the development of more efficient, integrated and competitive markets for roaming services, when negotiating wholesale roaming access for the purpose of providing retail roaming services, operators should be given the possibility of negotiating innovative wholesale pricing schemes which are not directly linked to volumes actually consumed, such as flat payments, upfront commitments or capacity-based wholesale roaming agreements, or pricing schemes that reflect variations of demand across the year. Subject to the limitations on permanent roaming included in this Regulation, machine-to-machine communications, namely services involving an automated transfer of data and information between devices or software-based applications with limited or no human interaction, are not excluded from the scope of this Regulation or the relevant wholesale roaming access obligations laid down in this Regulation, including the provisions on fair usage of roaming services and the possibility for mobile network operators of including in their reference offers conditions to prevent permanent use of regulated roaming services or the anomalous or abusive use of wholesale roaming access. However, permanent roaming is subject to commercial negotiations and can be agreed by two roaming partners in a wholesale roaming agreement. In order to allow the development of more efficient and competitive markets for machine-to-machine communications, it is expected that mobile network operators will increasingly respond to and accept all reasonable requests for wholesale roaming agreements on reasonable terms and explicitly allow permanent roaming for machine-to-machine communications.

They should be able to establish flexible wholesale roaming agreements enabling wholesale roaming services and to apply tariff schemes which are not based on the volume of data consumed but instead are based on alternative schemes, for example, the number of connected machines per month. In that context, in the event of a cross-border dispute, the parties involved should have recourse to the dispute resolution procedure laid down in Article 27 of Directive (EU) 2018/1972. The negotiating parties should have the option of agreeing not to apply maximum regulated wholesale roaming charges for the duration of wholesale roaming agreements. That would exclude the possibility for either party to subsequently request the application of volume based maximum wholesale charges to actual consumption, as set out in this Regulation. This should be without prejudice to obligations as regards the provision of regulated retail roaming services. Furthermore, the Commission Report takes note of the very recent development of new ways of trading wholesale roaming traffic, such as online trading platforms, that have the potential to facilitate the negotiation process between operators. The use of similar instruments could contribute to enhancing competition in the wholesale roaming market and drive further down actual wholesale rates charged.

- (22) Regulation (EU) No 531/2012 provides that end-users are not to be prevented by operators from accessing regulated data roaming services on a visited network offered by an alternative roaming provider. However, this structural measure, introduced by way of the obligation for the separate sale of data roaming services, has become ineffective following the introduction of RLAH. In addition, due to the lack of uptake in the market, this obligation no longer appears to be relevant. Therefore, provisions that require operators to provide separate sales of roaming data services at retail level should no longer apply.
- (23) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission in respect of setting out detailed rules on the application of fair use policies and on the methodology for assessing the sustainability of the provision of retail roaming services at domestic prices, as well as on the application to be submitted by a roaming provider for the purposes of that assessment. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council¹. Until the adoption of those implementing measures, Commission Implementing Regulation (EU) 2016/2286² should continue to apply.

¹ Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

² Commission Implementing Regulation (EU) 2016/2286 of 15 December 2016 laying down detailed rules on the application of fair use policy and on the methodology for assessing the sustainability of the abolition of retail roaming surcharges and on the application to be submitted by a roaming provider for the purposes of that assessment (OJ L 344, 17.12.2016, p. 46).

- (24) Regulatory obligations should be imposed at both retail and wholesale levels to protect the interests of roaming customers, since experience has shown that reductions in wholesale prices for Union-wide roaming services may not be reflected in lower retail prices for roaming, owing to the absence of incentives for this to happen. On the other hand, action to reduce the level of retail prices without addressing the level of the wholesale costs associated with the provision of those services could risk disrupting the orderly functioning of the internal market for roaming services and would not allow a higher degree of competition.
- (25) The abolition of retail roaming surcharges in accordance with Regulation (EU) 2015/2120 was necessary to establish and ease the functioning of a digital single market across the Union. However, that Regulation alone was not sufficient to ensure the proper functioning of the roaming market. This Regulation should contribute to pricing models in domestic markets not being affected by the abolition of retail roaming surcharges.
- (26) The relevant domestic retail price should be equal to the domestic retail per-unit charge. However, in situations where there are no specific domestic retail prices that could be used as a basis for a regulated retail roaming service (for example, in the case of domestic unlimited tariff plans, bundles or domestic tariffs which do not include data), the domestic retail price should be deemed to be the same charging mechanism as if the customer were consuming the domestic tariff plan in that customer's Member State.

(27) When roaming within the Union, roaming customers should be able to use the retail services to which they subscribe and benefit from the same level of quality of service as at home. To that end, and in accordance with the wholesale access obligations laid down in this Regulation, roaming providers and mobile network operators should take the necessary measures to ensure that regulated retail roaming services are provided under the same conditions as if such services were consumed domestically. For example, if the maximum available data speed of the visited network is equal to, or higher than, the maximum available speed offered domestically by the roaming provider, the roaming provider should not offer a lower speed than the maximum available speed provided domestically. If the maximum available data speed of the visited network is lower than the maximum available speed offered domestically by the roaming provider, the roaming provider should not offer a lower speed than that maximum available speed of the visited network. Where a newer network generation or technology is available on the visited network, the roaming provider should not restrict the roaming service to a network generation or technology older than that offered domestically. Furthermore, in particular during the transition to next generation mobile communications networks and technologies, where the implementation of those networks and technologies by the roaming provider and the visited network operator are not comparable, the roaming provider may offer the regulated retail roaming service with the existing mobile communication technology. Commercial considerations that result in a reduction of the quality of regulated retail roaming services, such as reducing bandwidth to reduce roaming volumes, should be prohibited. Operators should take reasonable measures to minimise any undue delay in handovers between mobile communications networks, without prejudice to Article 28 of Directive (EU) 2018/1972. National administrations and operators can conclude spectrum coordination agreements and ensure coverage, at least along 5G corridors and terrestrial transport paths.

(28) Roaming providers should be able to apply fair use policies to the consumption of regulated retail roaming services provided at the applicable domestic retail price. Fair use policies should only address the abusive or anomalous usage of regulated retail roaming services by roaming customers, such as the use of such services by roaming customers in a Member State other than that of their domestic provider for purposes other than periodic travel. Implementing measures on the application of fair use policies should ensure that this objective is not circumvented by roaming providers to pursue other purposes to the detriment of roaming customers engaged in any form of periodic travel. In cases of force majeure caused by circumstances such as pandemics, temporary border closures or natural disasters, which involuntarily extend the period of temporary stay of the roaming customer in another Member State, roaming providers should extend the applicable fair use allowance for an appropriate period upon a justified request by the roaming customer. Any fair use policy should enable the roaming provider's customers to consume volumes of regulated retail roaming services at the applicable domestic retail price that are consistent with their respective tariff plans. Implementing measures on the application of fair use policies should take into account the many and varied patterns of periodic travel by roaming customers, in order to ensure that fair use policies do not act as a barrier to a genuine RLAH experience on the part of such customers.

- (29) When reviewing its implementing acts the Commission, after consulting BEREC, should assess the extent to which market conditions, consumption and travel patterns, the evolution and convergence of pricing and the observable risk of distortion of competition would allow for a sustainable provision of roaming services at domestic prices for periodic travel and the possibility of limiting the application and effects of the measures under a fair use policy to exceptional cases.

(30) In specific and exceptional circumstances where a roaming provider is not able to recover its overall actual and projected costs of providing regulated retail roaming services from its overall actual and projected revenues from the provision of such services, that roaming provider should be able to apply for authorisation to apply a surcharge with a view to ensuring the sustainability of its domestic charging model. The assessment of the sustainability of the domestic charging model should be based on relevant objective factors specific to the roaming provider, including objective variations between roaming providers in the Member State concerned and the level of domestic prices and revenues. That may, for example, be the case for flat-rate domestic retail models of operators with significant negative traffic imbalances, where the implicit domestic unit price is low and the operator's overall revenues are also low relative to the roaming cost burden, or where the implicit unit price is low and actual or projected roaming services consumption is high. In order to avoid the domestic charging model of roaming providers being rendered unsustainable by such cost recovery problems, generating a risk of an appreciable effect on the evolution of domestic prices or so-called 'waterbed effect', roaming providers, upon authorisation by the national regulatory authority, should, in such circumstances, be able to apply a surcharge to regulated retail roaming services only to the extent necessary to recover all relevant costs of providing such services.

- (31) To that end, the costs incurred in order to provide regulated retail roaming services should be determined by reference to the effective wholesale roaming charges applied to the outbound roaming traffic of the roaming provider concerned in excess of its inbound roaming traffic, as well as by reference to reasonable provision for joint and common costs. Revenues from regulated retail roaming services should be determined by reference to revenues at domestic price levels attributable to the consumption of regulated retail roaming services, whether on a unit-price basis or as a proportion of a flat fee, reflecting the respective actual and projected proportions of regulated retail roaming services consumption by customers within the Union and domestic consumption. Account should also be taken of the consumption of regulated retail roaming services and domestic consumption by the roaming provider's customers, and of the level of competition, prices and revenues in the domestic market, and any observable risk that roaming at domestic retail prices would appreciably affect the evolution of such prices.
- (32) Regulation (EU) No 531/2012 provides that, where a roaming provider applies a surcharge for the consumption of regulated retail roaming services in excess of any limits under any fair use policy, the sum of the domestic retail price and any surcharge applied for regulated roaming calls made, regulated roaming SMS messages sent or regulated data roaming services are not to exceed EUR 0,19 per minute, EUR 0,06 per SMS message and EUR 0,20 per megabyte used, respectively. Given the effective functioning of RLAH rules since 15 June 2017, that provision is no longer necessary.

(33) In accordance with the principle that ‘the calling party pays’, mobile customers do not pay for receiving domestic mobile calls and the cost of terminating a call in the network of the called party is covered in the retail charge of the calling party. The convergence of mobile termination rates across the Member States should allow the same principle to be applied to regulated retail roaming calls. Pursuant to Article 75(1) of Directive (EU) 2018/1972, the Commission has established, by means of Commission Delegated Regulation (EU) 2021/654¹, a single maximum Union-wide voice termination rate for mobile services in order to reduce the regulatory burden in addressing the competition problems relating to wholesale voice termination consistently across the Union. Delegated Regulation (EU) 2021/654 includes a three-year glide path: the single maximum Union-wide mobile voice termination rates is to be EUR 0,7 cent in 2021, EUR 0,55 cent in 2022, EUR 0,4 cent in 2023, reaching the single maximum Union-wide mobile voice termination rate of EUR 0,2 cent from 2024 onwards. In the situations set out in this Regulation where roaming providers are allowed to apply a surcharge to regulated retail roaming services, the surcharge applied to regulated roaming calls received should not exceed the single maximum Union-wide mobile voice termination rate set by the Commission for the relevant year in Delegated Regulation (EU) 2021/654. If the Commission subsequently concludes that it is no longer necessary to set a single maximum Union-wide mobile voice termination rate, any surcharge applied to regulated roaming calls received should not exceed the rate set by the latest delegated act adopted under Article 75 of Directive (EU) 2018/1972.

¹ Commission Delegated Regulation (EU) 2021/654 of 18 December 2020 supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate (OJ L 137, 22.4.2021, p. 1).

- (34) Where providers of Union-wide regulated roaming services make changes to their retail roaming tariffs and to accompanying roaming usage policies in order to comply with the requirements of this Regulation, such changes should not trigger for mobile customers any right under national laws transposing Directive (EU) 2018/1972 to withdraw from their retail contracts.
- (35) A retail contract which includes any type of regulated retail roaming service should specify, in a clear and comprehensible manner, the characteristics of that regulated retail roaming service, including the expected level of quality of service. Although roaming providers do not exercise control over visited networks, the roaming services provided are subject to the wholesale roaming agreement with the visited network operator. Therefore, in order to empower roaming customers, roaming providers should inform their customers in the retail contract, in a clear manner, how the quality of the roaming services can differ in practice from the services consumed domestically. Roaming providers should also explain, to the extent possible, how other relevant factors can affect the quality of service, such as the speed, latency and availability of roaming services or other services when roaming, due to availability of certain technologies, coverage or variation due to external factors such as topography. Such a retail contract should also include clear and comprehensible information about the complaints procedure that is available where the quality of service does not correspond to the terms of the retail contract. The roaming provider should handle any complaints in that regard in a timely and effective manner.

- (36) In order to ensure that roaming customers are adequately informed about the quality of their roaming service, roaming providers should publish the relevant information on their webpages. To that end, they should include information about reasons why a roaming service could be offered under conditions that are less advantageous than those offered domestically. That information should contain, in particular, a clear and comprehensible explanation of possible significant deviations from the advertised or estimated maximum upload and download speeds that are offered domestically, and how such deviations can impact the roaming service to which the customer subscribes. The information could also include a clear and comprehensible explanation as to how any volume limitations, speed, available network generations and technologies and other quality of service parameters may in practice have an impact on the data roaming service, and in particular on the use of content, applications and services when roaming.

(37) Roaming customers and home operators sometimes unwittingly incur large bills as a result of the lack of transparency on the numbers used for value-added services across the Union and on the wholesale prices charged for value-added services, without prejudice to Article 97 of Directive (EU) 2018/1972. Communications to certain numbers which are used for providing value-added services, for example, premium-rate numbers, freephone numbers or shared cost numbers, are subject to particular pricing conditions at the national level. This Regulation should not apply to the part of the tariff that is charged for the provision of value-added services but only to the tariffs for the connection to such services. The RLAH principle might create an expectation for roaming customers that communications to such numbers while roaming should not incur any increased costs in comparison to the domestic situation. However, this is not always the case when roaming. Roaming customers are confronted with increased costs, even when they call numbers that are free when called domestically. This could erode customer confidence in using their phones when roaming and could result in ‘bill shock’, thus having a negative impact on a genuine RLAH experience. At retail level, this is mainly caused by the insufficient level of transparency regarding the higher charges which can be incurred for communications to numbers used for value-added services. Therefore, measures should be introduced to raise awareness of the risk of high bills and to increase transparency regarding the terms relating to communications to numbers for value-added services. To that end, roaming customers should be informed in their retail contract, and should be notified and warned, in a timely, user-friendly manner free of charge, that communications to numbers for value-added services in roaming can entail additional charges. The facility to deactivate third-party billing in Annex VI to Directive (EU) 2018/1972, if available, may be applied to roaming situations.

- (38) The functioning of wholesale roaming markets should allow operators to recover all the costs of providing regulated wholesale roaming services, including joint and common costs. The cost model relied upon for the purposes of the review process took into the utmost account investments made by operators in order to deliver mobile roaming services, such as the cost of spectrum, the cost of equipment and infrastructure investments, as well as the infrastructure deployed by operators and the technology that is expected to dominate consumption until the next review. The review planned for 2025 will rely on a new cost model, taking the utmost account of technological developments observed in the interim period. This should preserve incentives to invest in visited networks and avoid any distortion of domestic competition in the visited markets caused by regulatory arbitrage by operators using wholesale roaming access remedies to compete in domestic visited markets.

(39) In light of the objectives of this Regulation to ensure continued competition and the protection of end-users, this Regulation should set wholesale roaming price caps that reflect developments in the operators' costs of providing wholesale roaming services. The cost model used for the purposes of the review process and referred to in the impact assessment carried out for the purposes of this Regulation demonstrates that operators' costs have been gradually decreasing and continue to decrease. Considering the expected timeline for the planned review of wholesale caps on the basis of the two reports to be submitted by the Commission to the European Parliament and to the Council by 30 June 2025 and 30 June 2029, maximum wholesale charges should decrease on the basis of a glide path, taking into account relevant cost estimates and likely market developments in the period between 2022 and 2027.

- (40) The cost estimates for the provision of wholesale roaming services, including joint and common costs, have been assessed on the basis of several sources. One source was a general cost model for wholesale roaming services used for the purposes of the review process, which estimated the costs of an efficient operator when providing roaming wholesale services. The outcome of the cost model enables analysing costs, for each year in each Member State, under different scenarios and assumptions in the years in which it estimates costs. The cost model was populated with data submitted by the operators and was subsequently confirmed by the relevant national regulatory authorities. Seasonality was also taken into account for the Member States able to illustrate that it affected operators' network dimensioning. Throughout the period in which the cost model was developed, operators, BEREC and national regulatory authorities were consulted. The cost assessment also drew on current wholesale roaming charges in the Union and took into account the anticipated future take-up of updated network technologies, in line with indications received from BEREC in its opinions.
- (41) With regard to rules on wholesale charges, regulatory obligations at Union level should be maintained since any measure that enables RLAH across the Union without addressing the level of the wholesale costs associated with providing wholesale roaming services could risk disrupting the internal market for roaming services and would not encourage more competition. Wholesale charges at an appropriate level should facilitate sustainable competition, including by new entrants, small and medium-sized enterprises and start-ups.

- (42) Maximum wholesale charges should act as a safeguard level and should ensure that operators can recover their costs, including joint and common costs. They should also enable the widespread sustainable provision of RLAH, while at the same time leaving a margin for commercial negotiations between operators.
- (43) The practice by some mobile network operators of billing for the provision of wholesale roaming calls on the basis of minimum charging periods of up to 60 seconds, as opposed to the per-second basis normally applied for other wholesale interconnection charges, creates a distortion of competition between those operators and those applying different billing methods, and undermines the consistent application of the maximum wholesale charges laid down in this Regulation. Moreover it represents an additional charge which, by increasing wholesale costs, has negative consequences for the pricing of voice roaming services at retail level. Mobile network operators should therefore be required to bill for the wholesale provision of regulated roaming calls on a per-second basis.
- (44) To ensure that roaming customers have uninterrupted and effective access to emergency services free of charge, visited networks should not levy on the roaming providers any wholesale charges related to any type of emergency communications.

- (45) In order to improve the transparency of retail prices for roaming services and to help roaming customers make decisions on the use of their mobile devices while abroad, providers of mobile communication services should supply their roaming customers with information free of charge about the roaming charges applicable to them when using roaming services in a visited Member State. Since certain customer groups might be well informed about roaming charges, roaming providers should provide a possibility to easily opt-out from that automatic message. In addition, roaming customers should be provided with a text message including a link to access, free of charge, a webpage established by the roaming provider giving detailed information about the types of services, namely calls and SMS messages, that may be subject to increased costs, without prejudice to Article 97 of Directive (EU) 2018/1972. Roaming customers should be fully informed, in a clear manner, of any charges applicable to freephone numbers while roaming. Moreover, roaming providers should actively give their customers, provided that the latter are located in the Union, on request and free of charge, additional information on the per-minute, per-SMS message or per-megabyte data charges, including VAT, for the making or receiving of voice calls and for the sending and receiving of SMS messages, MMS messages and other data communication services in the visited Member State.

(46) A roaming customer can connect to a non-terrestrial public mobile communications network, such as on board marine vessels (MCV services) as defined in Commission Decision 2010/166/EU¹ or on aircraft (MCA services) as defined in Commission Decision 2008/294/EC², that are provided through types of radio networks other than terrestrial networks, by means of specific devices mounted on board. Those services are often accessible on international waters or on board aircraft. Charges incurred by roaming customers when they intentionally or inadvertently connect to non-terrestrial networks are significantly higher than tariffs for regulated roaming services. Roaming customers are accustomed to benefiting from RLAH and the use of roaming services at domestic prices. Due to the absence of a consistent approach to transparency and safeguard measures for connections to non-terrestrial networks, roaming customers are at greater risk of bill-shock. Therefore, additional transparency and safeguard measures should be introduced to apply to connections to non-terrestrial networks such as on marine vessels and aircraft.

¹ Commission Decision 2010/166/EU of 19 March 2010 on harmonised conditions of use of radio spectrum for mobile communication services on board vessels (MCV services) in the European Union (OJ L 72, 20.3.2010, p. 38).

² Commission Decision 2008/294/EC of 7 April 2008 on harmonised conditions of spectrum use for the operation of mobile communication services on aircraft (MCA services) in the Community (OJ L 98, 10.4.2008, p. 19).

Roaming providers should take reasonable steps to apply such transparency and safeguard measures. Such steps could include network operation measures, financial limits, an opt-out mechanism, or equivalent measures. They should, in particular, include measures to ensure that adequate information is provided in a clear and comprehensible manner, in order to empower roaming customers to actively prevent such instances of inadvertent roaming. Roaming providers that offer an opt-out mechanism should inform roaming customers about the limitations of the instant opt-in or reactivation of the service, such as the risk that without their connection to the network they will be unable to reactivate connection to a non-terrestrial network. Roaming providers should inform their roaming customers about the possibility of manually and instantly opting out of roaming on their handset device, either through the settings or by activating flight mode. To the extent possible, when planning and operating their networks, roaming providers should aim to prioritise connections to terrestrial networks to minimise the risk of inadvertent connection to non-terrestrial networks. In order to ensure a high level of protection for roaming customers, when connecting to non-terrestrial public mobile communications networks, providers of mobile communication services should provide their roaming customers with information about any additional charges that apply, by way of a text message free of charge every time a connection to such a network is established.

- (47) This Regulation should in relation to regulated retail roaming services lay down specific transparency requirements aligned with the specific tariff and volume conditions applicable following the abolition of the retail roaming surcharges. In particular, provision should be made for roaming customers to be notified, in a timely and user-friendly manner and free of charge, of the applicable fair use policy, when the applicable fair use volume of regulated voice, SMS or data roaming services is fully consumed, of any surcharge, and of accumulated consumption of regulated data roaming services.
- (48) Customers living in border regions should not receive unnecessarily high bills due to inadvertent roaming. Roaming providers should therefore take all reasonable steps to minimise the risk of inadvertent roaming and to protect customers against incurring roaming charges while they are located in their Member State. Such steps should include financial limits, mechanisms to opt out of roaming on a network outside the Union where technically feasible, or equivalent measures. Such steps should in particular include adequate measures for the provision of information in a clear and comprehensible manner in order to empower customers to actively prevent such instances of inadvertent roaming. National regulatory authorities and other competent authorities responsible for safeguarding and promoting the interests of customers who normally reside within their territory should be alert to situations in which customers face problems with paying roaming charges while they are still located in their Member State and should take appropriate steps to mitigate the problem.

- (49) Moreover, measures should be laid down to ensure the transparency of retail charges for all data roaming services, including for connecting to non-terrestrial public mobile communications networks, in particular to eliminate the problem of bill shock, which constitutes a barrier to the smooth functioning of the internal market, and to provide roaming customers with the tools they need to monitor and control their expenditure on data roaming services. Equally, there should be no obstacles to the emergence of applications or technologies which can be a substitute for, or alternative to, roaming services, including but not limited to Wi-Fi.
- (50) In addition, in order to avoid bill shocks, roaming providers should establish one or more maximum financial or volume limits for their outstanding charges for all data roaming services, expressed in the currency in which the roaming customer is billed, which they should offer to all their roaming customers, free of charge, with an appropriate notification, in a media format that can be consulted again subsequently, when that limit is being approached. Upon reaching that maximum limit, customers should no longer receive or be charged for those services unless they specifically request continued provision of those services in accordance with the terms and conditions set out in the notification. In such a case, they should receive free confirmation, in a media format that can be consulted again subsequently. Roaming customers should be given the opportunity to opt out of those maximum financial or volume limits within a reasonable period or to choose not to have such a limit. Unless customers state otherwise, they should be put on a default limit system.

- (51) These transparency measures should be seen as minimum safeguards for roaming customers, and should not preclude roaming providers from offering their customers a range of other facilities which help them to predict and control their expenditure on data roaming services.
- (52) Customers under pre-paid tariffs may also suffer from bill shocks for the use of data roaming services. For that reason provisions on cut-off limit should also apply to those customers.

(53) Consumers do not always distinguish between access to electronic communications services while roaming, namely where end-users access such services in visited Member States, and intra-EU communications, namely where consumers located in their home Member State make calls or send SMS messages to another Member State. While roaming and intra-EU communications constitute two distinct and separate markets, certain parallels can be drawn between them from a consumer perspective. Since 15 May 2019, the retail price, excluding VAT, that can be charged to consumers for regulated intra-EU communications has been capped at EUR 0,19 per minute for calls and EUR 0,06 per SMS message. With the prolongation of the RLAH measures introduced by this Regulation, which address the risk of discouraging cross-border communication and enabling the establishment of an internal market, it should be considered appropriate to look into the development of the intra-EU communications market. To that end, the existing measures should be evaluated in light of the application of Directive (EU) 2018/1972 and, in particular, the rules on interpersonal communication services, and the introduction of single maximum Union-wide voice termination rates, which is a component of the cost structure of intra-EU communications. The Commission, with the support of BEREC, should assess the effects of the existing measures introduced by Regulation (EU) 2018/1971 of the European Parliament and of the Council¹ and determine whether and to what extent there is an ongoing need to reduce the caps in order to protect consumers. That assessment should take place at least one year before the expiry of those measures on 14 May 2024.

¹ Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No 1211/2009 (OJ L 321, 17.12.2018, p. 1).

- (54) There are considerable disparities between regulated roaming tariffs within the Union and roaming tariffs incurred by customers when they are travelling outside the Union, which are significantly higher than prices within the Union, where roaming surcharges are only exceptionally applied following the abolition of retail roaming charges. Due to the absence of a consistent approach to transparency and safeguard measures concerning roaming outside the Union, consumers are not confident about their rights and are therefore often deterred from using mobile services while abroad. Transparent information provided to consumers could not only assist them in the decision as to how to use their mobile devices while travelling abroad (both within and outside the Union), but could also assist them in the choice between roaming providers. It is therefore necessary to address the problem of the lack of transparency and consumer protection by applying certain transparency and safeguard measures also to roaming services provided outside the Union. Those measures should facilitate competition and improve the functioning of the internal market.
- (55) Union citizens face high roaming charges when using retail roaming services in third countries. Therefore, initiatives that aim to lower the roaming charges for roaming services between the Union and third countries on a reciprocal basis should be encouraged. In particular, end-users in the Union external border regions would greatly benefit from lower roaming charges with the neighbouring third countries.
- (56) If the visited network operator in the visited third country does not allow the roaming provider to monitor its customers' usage on a real-time basis, the roaming provider should not be obliged to provide the maximum financial or volume limits for safeguarding customers.

(57) Roaming providers should inform roaming customers of the possibility of accessing emergency services free of charge by calling the single European emergency number ‘112’ and should inform roaming customers of alternative means of access through emergency communications that are technically feasible for use by roaming customers, in particular by roaming customers with disabilities. Alternative means of access through emergency communications enable roaming customers, in particular roaming customers with disabilities, to access emergency services through means other than calls. For example, alternative means of access may be ensured through emergency applications, messaging, relay services or real time text or total conversation implemented pursuant to Article 4 of Directive (EU) 2019/882. The information on the means of access should be provided by an SMS message which informs the roaming customer of the possibility of accessing emergency services free of charge by calling the single European emergency number ‘112’ and which provides a link to a dedicated webpage, that can be accessed free of charge and complies with Directive (EU) 2016/2102 of the European Parliament and of the Council¹, describing, in an easily understandable way, the alternative means of access to emergency services in the visited Member State and indicating only those means of access that are technically feasible for use by roaming customers. The dedicated webpage should contain information in the language in which the roaming provider communicates with the roaming customer.

¹ Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies (OJ L 327, 2.12.2016, p. 1).

(58) Article 110 of Directive (EU) 2018/1972 requires Member States to ensure that their public warning systems transmit public warnings to end-users concerned, namely end-users who are located in the geographic areas potentially being affected by imminent or developing major emergencies and disasters during the warning period, including roaming end-users. Currently available technologies enable national authorities to send public warnings to concerned roaming customers without the need for prior action by the roaming customer, such as downloading an application. However, in some Member States, public warning mobile applications which allow sending rich information to end-users are deployed, sometimes in addition to the previously mentioned technologies. In the Member States where the link to such a national public warning mobile application is provided in the database of the means of access to emergency services that are mandated in each Member State established pursuant to this Regulation, roaming providers should inform roaming customers of the link to that application. The information should be provided in the language in which the roaming provider communicates with the roaming customer. With reference to the preamble to Directive (EU) 2018/1972, the Commission will assess possibilities for enabling roaming customers concerned to receive public warnings issued by the competent national authorities, including through a mobile application when travelling within the Union, through a Union-wide public warning system that complements national public warning systems.

(59) Numbering ranges, including those used for value-added services, are set in the national numbering plans and are not harmonised at Union level. Operators may therefore not be able to recognise the numbering ranges for value-added services in all countries in advance. Numbering ranges used for value-added services are subject to particular pricing conditions at the national level, and in many cases their termination rates are not regulated. While this is understood by roaming providers, the level of the wholesale charges they will incur may still be unexpectedly high. In a roaming scenario, operators are unable to address this issue because they lack information on numbering ranges used for value-added services throughout the Union. To address this problem, BEREC should establish and maintain a single Union-wide, secure database of numbering ranges for value-added services. The database is intended to enhance transparency, enabling national regulatory authorities and, where applicable, other competent authorities, as well as operators, to have direct access to information about which numbering ranges can generate higher costs (termination rates) in all Member States. It represents a necessary intermediate step to increase transparency at retail level as it could be used to inform roaming customers about the types of services that may be subject to increased charges when roaming. With a view to providing better consumer protection and transparency, it should be possible for the database to contain additional information, for example about the tariffs associated with numbering ranges for value-added services, such as per minute or per act tariffs. Such tariff information could be made available on the dedicated webpage providing information about value-added services. BEREC should establish the procedures by which competent authorities are to provide and update the information in the database of numbering ranges for value-added services established pursuant to this Regulation.

- (60) BEREC should establish and maintain a single Union-wide database of means of access to emergency services that are mandated and are technically feasible to be used by roaming end-users in each Member State. The database is intended to help national operators, national regulatory authorities and, where applicable, other competent authorities to be informed of all these means of access to emergency services deployed in the Union. Member States should be able to update the database with the link to the national public warning mobile application, if applicable. BEREC should establish the procedures by which the competent authorities are to provide and update the information requested pursuant to this Regulation.

(61) Where Member States assign to competent authorities other than national regulatory authorities some of the tasks related to end-user protection, for instance regarding information requirements for retail contracts, transparency, or contract termination, the competence of those competent authorities for those tasks covers all parts of the retail contract, including the roaming related rights and obligations. Without prejudice to the assignment of tasks under Directive (EU) 2018/1972, the national regulatory authorities and, where applicable, other competent authorities which are responsible for carrying out tasks under that Directive should have the powers needed to monitor, supervise and enforce the obligations under this Regulation within their territory. They should also monitor developments in the pricing of voice, SMS and data services for roaming customers within the Union including, where appropriate, the specific costs related to roaming calls made and received in the outermost regions of the Union and the need to ensure that these costs can be adequately recovered on the wholesale market, and that traffic-steering techniques are not used to limit choice to the detriment of customers. They should ensure that up-to-date information on the application of this Regulation is made available to interested parties and publish the results of such monitoring. Information should be provided on corporate, post-paid and pre-paid customers separately.

- (62) In-country roaming in the outermost regions of the Union, where mobile telephony licences are distinct from those issued in respect of the rest of the national territory, could benefit from rate reductions equivalent to those practised on the internal market for roaming services. The implementation of this Regulation should not give rise to less favourable pricing treatment for customers using in-country roaming services as opposed to customers using Union-wide roaming services. To that end, the national authorities may take additional measures consistent with Union law.
- (63) While ensuring business confidentiality and in order to monitor and supervise the application of this Regulation and developments in wholesale roaming markets, national regulatory authorities should be entitled to require information on wholesale roaming agreements that do not provide for the application of the maximum wholesale roaming charges. Those authorities should also be allowed to require information on the adoption and application of conditions in wholesale roaming agreements aiming to prevent permanent roaming and any anomalous or abusive use of wholesale roaming access for purposes other than the provision of regulated roaming services to roaming providers' customers travelling within the Union.

- (64) Where Union providers of mobile services find the benefits of interoperability and end-to-end connectivity for their customers jeopardised by the termination, or threat of termination, of their roaming arrangements with mobile network operators in another Member State or where they are unable to provide their customers with services in another Member State as a result of a lack of agreement with at least one wholesale network provider, national regulatory authorities, or other competent authorities in the situations referred to under Article 61(2), points (b) and (c) of Directive (EU) 2018/1972, should make use, where necessary, of the powers under Article 61 of that Directive to ensure adequate access and interconnection, taking into account the objectives set out in Article 3 of that Directive, in particular the development of the internal market by favouring the provision, availability and interoperability of pan-European services, and end-to-end connectivity.

(65) The specific price regulation applicable to wholesale roaming services entails that an overall Union cap applies to a composite product which may also include other wholesale roaming access and interconnection inputs, including, in particular, those subject to national or, potentially, cross-border regulation. In this regard divergences across the Union in the regulation of those inputs are predicted to decrease, in particular because of additional measures taken in accordance with Directive (EU) 2018/1972 aiming to ensure greater consistency of regulatory approaches. In the meantime, any dispute between visited network operators and other operators on the rates applied to those regulated inputs necessary for the provision of wholesale roaming services should be addressed, taking into account BEREC's opinion, where it has been consulted, in accordance with the specific regulatory obligations applicable to roaming as well as with Directive (EU) 2018/1972.

- (66) It is necessary to monitor and to review regularly the functioning of wholesale roaming markets and their interrelationship with the retail roaming markets, taking into account competitive and technological developments and traffic flows. The Commission should submit two reports to the European Parliament and to the Council, followed, if appropriate, by a legislative proposal. In those reports, the Commission should, in particular, assess whether RLAH has any impact on the evolution of tariff plans available on the retail markets. That should include, on the one hand, an assessment of the emergence of any tariff plans that include only domestic services and that exclude retail roaming services altogether, thus undermining the very objective of RLAH and, on the other, an assessment of any reduction in the availability of flat-rate tariff plans, which could also represent a loss for consumers and undermine the objectives of the digital single market.

The Commission's reports should, in particular, analyse the extent to which exceptional retail roaming surcharges have been authorised by national regulatory authorities, the ability of home network operators to sustain their domestic charging models and the ability of visited network operators to recover the efficiently incurred costs of providing regulated wholesale roaming services. In addition, the Commission's reports should assess: how, at wholesale level, access to the different network technologies and generations is ensured; the information about wholesale pricing for data services; the level of usage of trading platforms and similar instruments to trade traffic at wholesale level; the evolution of machine-to-machine roaming; persistent problems at retail level in relation to value-added services; the application of the measures on emergency communications; the transparency measures on roaming in third countries and non-terrestrial public mobile networks aiming to prevent inadvertent roaming; the effectiveness of the quality of service obligations laid down in this Regulation; and the extent to which customers are properly informed in their retail contracts about those obligations and can benefit from a genuine RLAH experience. Furthermore, the Commission's reports should assess what impact the roll-out and implementation of new technologies, as well as pandemics and natural disasters, have on the roaming market. In order to enable such reporting with a view to assessing how the roaming markets adapt to RLAH rules, sufficient data should be gathered on the functioning of those markets after the implementation of those rules.

(67) In order to assess competitive developments in Union-wide roaming markets and to report regularly on changes in actual wholesale roaming charges for unbalanced traffic between providers of roaming services, BEREC should continue to collect data from national regulatory authorities. Where applicable, national regulatory authorities should be able to coordinate with other competent authorities. Such data should include the actual charges applied for balanced and unbalanced traffic, respectively, together with actual traffic volumes for the relevant roaming services. The collection of data that allows the monitoring and assessment of the impact of changes in travel behaviour and consumption patterns, such as changes caused by pandemics, is vital for the analysis required in the reports provided for by this Regulation. BEREC should also collect data on cases where parties to a wholesale roaming agreement have opted out of the application of maximum wholesale roaming charges or have implemented measures at wholesale level that aim to prevent permanent roaming or anomalous or abusive use of wholesale roaming access for purposes other than the provision of regulated roaming services to roaming providers' customers while the latter are periodically travelling within the Union. On the basis of the data collected with sufficient level of granularity, BEREC should report regularly on the relationship between retail prices, wholesale charges and wholesale costs for roaming services. By 30 June 2027, the Commission should submit a report to the European Parliament and to the Council, based on the regular BEREC reports, followed, if appropriate, by a legislative proposal. BEREC should also collect the necessary data to allow the monitoring of the elements to be assessed by the Commission in the reports provided in this Regulation.

- (68) In the medium term, facilitating machine-to-machine roaming and internet-of-things (IoT) roaming should be recognised as an important driver for digitising the Union’s industry and should build on related Union policies in sectors such as health, energy, environment, and transport. The Commission should regularly assess the role of roaming in the market for machine-to-machine connectivity and in the IoT market. If appropriate, the Commission should also provide recommendations, after consulting BEREC. BEREC should also collect the necessary data to allow the monitoring of the elements to be assessed in the Commission’s reports on the development of machine-to-machine roaming and IoT devices provided for in this Regulation, taking into account cellular connectivity solutions based on unlicensed spectrum.
- (69) The Commission, BEREC, the national regulatory authorities and, where applicable, other competent authorities concerned should fully ensure business confidentiality when sharing information for the purposes of reviewing, monitoring and supervising the application of this Regulation. Compliance with business confidentiality requirements should therefore not prevent national regulatory authorities from being able to share in a timely manner confidential information for such purposes.

- (70) Since the objectives of this Regulation, namely to provide for a common approach for ensuring that users of public mobile communications networks, when travelling within the Union, do not pay excessive prices for Union-wide roaming services in comparison with competitive national prices, and to increase transparency and consumer protection, as well as to ensure the sustainability of the provision of retail roaming services at domestic prices and a genuine RLAH experience in terms of quality of service and access to emergency services while roaming, cannot be sufficiently achieved by the Member States but can rather be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives.
- (71) This Regulation respects the fundamental rights and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union.
- (72) The European Data Protection Supervisor was consulted in accordance with Article 42 of Regulation (EU) 2018/1725 of the European Parliament and of the Council¹, and delivered an opinion on 20 April 2021,

HAVE ADOPTED THIS REGULATION:

¹ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

Article 1

Subject matter and scope

1. This Regulation provides for a common approach for ensuring that users of public mobile communications networks, when travelling within the Union, do not pay excessive prices for Union-wide roaming services in comparison with competitive national prices, when making calls and receiving calls, when sending and receiving SMS messages and when using packet switched data communication services.

This Regulation thereby contributes to the smooth functioning of the internal market while achieving a high level of consumer protection, data protection, privacy and trust, fostering competition, independence and transparency in the market and offering incentives for innovation, consumer choice and the integration of persons with disabilities, while fully complying with the Charter of Fundamental Rights of the European Union.

This Regulation sets out the conditions for wholesale access to public mobile communications networks for the purpose of providing regulated roaming services. It applies both to charges levied by network operators at wholesale level and to charges levied by roaming providers at retail level.

2. This Regulation also lays down rules aiming to increase transparency and improving the provision of information on charges to users of roaming services, including users of non-regulated roaming services in third countries. It also increases transparency for users of non-regulated roaming services when they connect to a non-terrestrial public mobile communications network, such as on board vessels or aircraft, where applicable.
3. The maximum charges set out in this Regulation are expressed in euro.
4. Where maximum charges under Articles 8 to 11 are denominated in currencies other than the euro, the values shall be determined in those currencies by applying the average of the reference exchange rates published on 15 January, 15 February and 15 March of the relevant calendar year by the European Central Bank in *the Official Journal of the European Union*. For the maximum charges, the limits in currencies other than the euro shall be revised annually as from 2023. The annually revised limits in those currencies shall apply from 15 May.
5. This Regulation is without prejudice to the assignment of tasks to national regulatory authorities and other competent authorities under Directive (EU) 2018/1972, including the responsibilities for implementing Part III, Title III of that Directive.

Article 2
Definitions

1. For the purposes of this Regulation, the definitions set out in Article 2 of Directive (EU) 2018/1972 shall apply.
2. In addition to the definitions referred to in paragraph 1, the following definitions shall apply:
 - (a) ‘roaming provider’ means an undertaking that provides a roaming customer with regulated retail roaming services;
 - (b) ‘domestic provider’ means an undertaking that provides a roaming customer with domestic mobile communications services;
 - (c) ‘home network’ means a public communications network located within a Member State and used by the roaming provider for the provision of regulated retail roaming services to a roaming customer;
 - (d) ‘visited network’ means a terrestrial public mobile communications network situated in a Member State other than that of the roaming customer’s domestic provider that permits a roaming customer to make or receive calls, to send or receive SMS messages or to use packet switched data communications, by means of arrangements with the home network operator;

- (e) ‘Union-wide roaming’ means the use of a mobile device by a roaming customer to make or receive intra-Union calls, to send or receive intra-Union SMS messages, or to use packet switched data communications, while in a Member State other than that in which the network of the domestic provider is located, by means of arrangements between the home network operator and the visited network operator;
- (f) ‘roaming customer’ means a customer of a roaming provider of regulated roaming services, by means of a terrestrial public mobile communications network situated in the Union, whose retail contract or arrangement with that roaming provider permits Union-wide roaming;
- (g) ‘regulated roaming call’ means a mobile voice telephony call made by a roaming customer, originating on a visited network and terminating on a public communications network within the Union or received by a roaming customer, originating on a public communications network within the Union and terminating on a visited network;
- (h) ‘SMS message’ means a Short Message Service text message, composed principally of alphabetical or numerical characters, or both, capable of being sent between mobile and/or fixed numbers assigned in accordance with national numbering plans;

- (i) ‘regulated roaming SMS message’ means an SMS message sent by a roaming customer, originating on a visited network and terminating on a public communications network within the Union or received by a roaming customer, originating on a public communications network within the Union and terminating on a visited network;
- (j) ‘regulated data roaming service’ means a roaming service enabling the use of packet switched data communications by a roaming customer by means of his mobile device while it is connected to a visited network, excluding the transmission or receipt of regulated roaming calls or SMS messages, but including the transmission and receipt of MMS messages;
- (k) ‘wholesale roaming access’ means direct wholesale roaming access or wholesale roaming resale access;
- (l) ‘direct wholesale roaming access’ means the making available of facilities or services, or both, by a mobile network operator to another undertaking, under defined conditions, for the purpose of that other undertaking providing regulated roaming services to roaming customers;

- (m) ‘wholesale roaming resale access’ means the provision of roaming services on a wholesale basis by a mobile network operator different from the visited network operator to another undertaking for the purpose of that other undertaking providing regulated roaming services to roaming customers;
- (n) ‘domestic retail price’ means a roaming provider’s domestic retail per-unit charge applicable to calls made and SMS messages sent, originating and terminating on different public communications networks within the same Member State, and to data consumed by a customer.

With regard to the first subparagraph, point (n), in the event that there is no specific domestic retail per-unit charge, the domestic retail price shall be deemed to be the same charging mechanism as that applied to the customer for calls made and SMS messages sent, originating and terminating on different public communications networks within the same Member State, and data consumed in that customer’s Member State.

Article 3

Wholesale roaming access

1. Mobile network operators shall meet all reasonable requests for wholesale roaming access, in particular in a manner that allows the roaming provider to replicate the retail mobile services offered domestically where it is technically feasible to do so on the visited network.
2. Mobile network operators may refuse requests for wholesale roaming access only on the basis of objective criteria, such as technical feasibility and network integrity. Commercial considerations shall not be grounds to refuse requests for wholesale roaming access in order to limit the provision of competing roaming services.
3. Wholesale roaming access shall cover access to all network elements and associated facilities, relevant services, software and information systems, necessary for the provision of regulated roaming services to customers, and shall cover all available network technologies and all available network generations.

4. Rules on regulated wholesale roaming charges laid down in Articles 9, 10 and 11 shall apply to the provision of access to all components of wholesale roaming access referred to in paragraph 3 of this Article, unless both parties to the wholesale roaming agreement explicitly agree that any average wholesale roaming charge resulting from the application of the agreement is not subject to the maximum regulated wholesale roaming charge for the period of validity of the agreement.

Without prejudice to the first subparagraph of this paragraph, in the case of wholesale roaming resale access, mobile network operators may charge fair and reasonable prices for components not covered by paragraph 3.

5. Mobile network operators shall publish a reference offer, taking into account the BEREC guidelines referred to in paragraph 8, and shall make it available to an undertaking requesting wholesale roaming access. Mobile network operators shall provide the undertaking requesting access with a draft wholesale roaming agreement, in accordance with this Article, for such access at the latest one month after the initial receipt of the request by the mobile network operator. The wholesale roaming access shall be granted within a reasonable period of time not exceeding three months from the conclusion of the wholesale roaming agreement. Mobile network operators receiving a wholesale roaming access request and undertakings requesting access shall negotiate in good faith.

6. The reference offer referred to in paragraph 5 shall be sufficiently detailed and shall include all components necessary for wholesale roaming access as referred to in paragraph 3, providing a description of the offerings relevant for direct wholesale roaming access and wholesale roaming resale access, and the associated terms and conditions. The reference offer shall contain all information necessary to enable the roaming provider to ensure its customers have access, free of charge, to emergency services through emergency communications to the most appropriate PSAP and to enable the transmission, free of charge, of caller location information to the most appropriate PSAP while using roaming services.

That reference offer may include conditions to prevent permanent roaming or anomalous or abusive use of wholesale roaming access for purposes other than the provision of regulated roaming services to roaming providers' customers while the latter are periodically travelling within the Union. Where specified in a reference offer, such conditions shall include the specific measures that the visited network operator may take to prevent permanent roaming or anomalous or abusive use of wholesale roaming access as well as the objective criteria on the basis of which such measures may be taken. Such criteria may refer to aggregate roaming traffic information. They shall not refer to specific information relating to individual traffic of the roaming provider's customers.

The reference offer may, *inter alia*, provide that where the visited network operator has reasonable grounds for considering that permanent roaming by a significant share of the roaming provider's customers or anomalous or abusive use of wholesale roaming access is taking place, the visited network operator may require the roaming provider to provide, without prejudice to Union and national data protection requirements, information allowing the determination of whether a significant share of the roaming provider's customers is in a situation of permanent roaming or whether there is anomalous or abusive use of wholesale roaming access on the network of the visited operator, such as information on the share of customers for which a risk of anomalous or abusive use of regulated retail roaming services provided at the applicable domestic retail price has been established on the basis of objective indicators in accordance with the implementing acts on the application of fair use policies adopted pursuant to Article 7.

The reference offer may, as a last resort, where less stringent measures have failed to address the situation, provide for the possibility to terminate a wholesale roaming agreement where the visited network operator has established that, based on objective criteria, permanent roaming by a significant share of the roaming provider's customers or anomalous or abusive use of wholesale roaming access is taking place, and has informed the home network operator accordingly.

The visited network operator may terminate the wholesale roaming agreement unilaterally on grounds of permanent roaming or anomalous or abusive use of wholesale roaming access only upon prior authorisation of the visited network operator's national regulatory authority.

Within three months of receipt of a request by the visited network operator for authorisation to terminate a wholesale roaming agreement, the national regulatory authority of the visited network operator shall, after consulting the national regulatory authority of the home network operator, decide whether to grant or refuse such authorisation and shall inform the Commission accordingly.

The national regulatory authorities of the visited network operator and of the home network operator may each request BEREC to adopt an opinion with regard to the action to be taken in accordance with this Regulation. BEREC shall adopt its opinion within one month of receipt of such a request.

Where BEREC has been consulted, the national regulatory authority of the visited network operator shall await and take the utmost account of BEREC's opinion before deciding, subject to the three-month deadline referred to in the sixth subparagraph, whether to grant or refuse authorisation for the termination of the wholesale roaming agreement.

The national regulatory authority of the visited network operator shall make information concerning authorisations to terminate wholesale roaming agreements available to the public, subject to business confidentiality.

The fifth to ninth subparagraphs of this paragraph shall be without prejudice to the power of a national regulatory authority to require the immediate cessation of a breach of the obligations set out in this Regulation pursuant to Article 17(7) and to the right of the visited network operator to apply adequate measures in order to combat fraud.

If necessary, national regulatory authorities shall impose changes to reference offers, including as regards the specific measures that the visited network operator may take to prevent permanent roaming or anomalous or abusive use of wholesale roaming access, and the objective criteria on the basis of which the visited network operator may take such measures, to give effect to obligations laid down in this Article.

7. Where the undertaking requesting the access desires to enter into commercial negotiations to include components not covered by the reference offer, the mobile network operators shall respond to such a request within a reasonable period of time not exceeding two months from its initial receipt. For the purposes of this paragraph, paragraphs 2 and 5 shall not apply.

8. By... [six months after the date of adoption (the date of the Council decision referred to in footnote 2) of this Regulation], in order to contribute to the consistent application of this Article, BEREC shall, after consulting stakeholders and in close cooperation with the Commission, update the guidelines for wholesale roaming access laid down in accordance with Article 3(8) of Regulation (EU) No 531/2012.

Article 4

Provision of regulated retail roaming services

1. Roaming providers shall not levy any surcharge in addition to the domestic retail price on roaming customers in any Member State for any regulated roaming calls made or received, for any regulated roaming SMS messages sent or for any regulated data roaming services used, nor shall they levy any general charge to enable the terminal equipment or service to be used abroad, subject to Articles 5 and 6.
2. Roaming providers shall not offer regulated retail roaming services under conditions that are less advantageous than those offered domestically, in particular in terms of the quality of service provided for in the retail contract, where the same generation of mobile communications networks and technologies are available on the visited network.

Mobile communication operators shall avoid unreasonable delays in handovers between networks at internal Union border crossings.

3. In order to contribute to the consistent application of this Article, by 1 January 2023, after consulting stakeholders and in close cooperation with the Commission, BEREC shall update its retail guidelines regarding the implementation of the quality-of-service measures.

Article 5

Fair use

1. Roaming providers may apply in accordance with this Article and the implementing acts adopted pursuant to Article 7 a fair use policy to the consumption of regulated retail roaming services provided at the applicable domestic retail price level, in order to prevent abusive or anomalous usage of regulated retail roaming services by roaming customers, such as the use of such services by roaming customers in a Member State other than that of their domestic provider for purposes other than periodic travel.

Any fair use policy shall enable the roaming provider's customers to consume volumes of regulated retail roaming services at the applicable domestic retail price that are consistent with their respective tariff plans.

2. Article 8 shall apply to regulated retail roaming services exceeding any limits under any fair use policy.

Article 6
Sustainability mechanism

1. In specific and exceptional circumstances, with a view to ensuring the sustainability of its domestic charging model, where a roaming provider is not able to recover its overall actual and projected costs of providing regulated roaming services in accordance with Articles 4 and 5, from its overall actual and projected revenues from the provision of such services, that roaming provider may apply for authorisation to apply a surcharge. That surcharge shall be applied only to the extent necessary to recover the costs of providing regulated retail roaming services, having regard to the applicable maximum wholesale charges.
2. Where a roaming provider decides to avail itself of paragraph 1 of this Article, it shall without delay submit an application to the national regulatory authority and provide it with all necessary information in accordance with the implementing acts referred to in Article 7. Every 12 months thereafter, the roaming provider shall update that information and submit it to the national regulatory authority.

3. Upon receipt of an application pursuant to paragraph 2, the national regulatory authority shall assess whether the roaming provider has established that it is unable to recover its costs in accordance with paragraph 1, with the effect that the sustainability of its domestic charging model would be undermined. The assessment of the sustainability of the domestic charging model shall be based on relevant objective factors specific to the roaming provider, including objective variations between roaming providers in the Member State concerned and the level of domestic prices and revenues. The national regulatory authority shall authorise the surcharge where the conditions laid down in paragraph 1 and in this paragraph are met.

4. Within one month of receipt of an application pursuant to paragraph 2, the national regulatory authority shall authorise the surcharge unless the application is manifestly unfounded or provides insufficient information. Where the national regulatory authority considers that the application is manifestly unfounded, or considers that insufficient information has been provided, it shall take a final decision within a further period of two months, after having given the roaming provider the opportunity to be heard, authorising, amending or refusing the surcharge.

Article 7

Implementation of fair use policy and of sustainability mechanism

1. In order to ensure consistent application of Articles 5 and 6, the Commission shall, after consulting BEREC, adopt implementing acts laying down detailed rules on the following:
 - (a) the application of fair use policies;
 - (b) the methodology for assessing the sustainability of the provision of retail roaming services at domestic prices; and
 - (c) the application to be submitted by a roaming provider for the purposes of the assessment referred to in point (b).

The implementing acts referred to in the first subparagraph of this paragraph shall be adopted in accordance with the examination procedure referred to in Article 20(2).

The Commission shall, after consulting BEREC, review the implementing acts referred to in the first subparagraph periodically in light of market developments.

2. When adopting implementing acts laying down detailed rules on the application of fair use policies, the Commission shall take into account the following:
 - (a) the evolution of pricing and consumption patterns in the Member States;
 - (b) the degree of convergence of domestic price levels across the Union;
 - (c) the travelling patterns in the Union;
 - (d) any observable risks of distortion of competition and investment incentives in domestic and visited markets.

3. The Commission shall base the implementing acts referred to in paragraph 1, points (b) and (c) on the following:
 - (a) the determination of the overall actual and projected costs of providing regulated retail roaming services by reference to the effective wholesale roaming charges for unbalanced traffic and a reasonable share of the joint and common costs necessary to provide regulated retail roaming services;
 - (b) the determination of overall actual and projected revenues from the provision of regulated retail roaming services;
 - (c) the consumption of regulated retail roaming services and the domestic consumption by the roaming provider's customers;

(d) the level of competition, prices and revenues in the domestic market, and any observable risk that roaming at domestic retail prices would appreciably affect the evolution of such prices.

4. The national regulatory authority and, where applicable for the exercise of the powers conferred on them by national law transposing Directive (EU) 2018/1972, other competent authorities shall strictly monitor and supervise the application of fair use policies. The national regulatory authority shall strictly monitor and supervise the application of the measures on the sustainability of the provision of retail roaming services at domestic prices, taking utmost account of relevant objective factors specific to the Member State concerned and of relevant objective variations between roaming providers. Without prejudice to the procedure set out in Article 6(3), the national regulatory authority shall, in a timely manner, enforce the requirements of Articles 5 and 6 and the implementing acts provided for in paragraph 2 of this Article. The national regulatory authority may at any time require the roaming provider to amend or discontinue the surcharge if it does not comply with Article 5 or 6.

Other competent authorities shall enforce the requirements of Article 5 and of the implementing acts which are relevant for the exercise of the powers conferred on them by national law transposing Directive (EU) 2018/1972, as the case may be.

The national regulatory authority and, where applicable, other competent authorities shall inform the Commission annually concerning the application of Articles 5 and 6, and of this Article.

5. Implementing Regulation (EU) 2016/2286 shall continue to apply until the date of application of a new implementing act adopted pursuant to paragraph 1 of this Article.

Article 8

Exceptional application of retail surcharges for the consumption of regulated retail roaming services and provision of alternative tariffs

1. Without prejudice to the third subparagraph, where a roaming provider applies a surcharge for the consumption of regulated retail roaming services in excess of any limits under any fair use policy, it shall meet the following requirements, excluding VAT:
 - (a) any surcharge applied for regulated roaming calls made, regulated roaming SMS messages sent and regulated data roaming services shall not exceed the maximum wholesale charges provided for in Articles 9(2), 10(1) and 11(1), respectively;
 - (b) any surcharge applied for regulated roaming calls received shall not exceed the single maximum Union-wide mobile voice termination rates set for that year in accordance with Article 75(1) of Directive (EU) 2018/1972.

With regard to point (b) of the first subparagraph of this paragraph, where the Commission decides, following its review of the delegated act adopted pursuant to Article 75(1) of Directive (EU) 2018/1972, that setting a Union-wide voice termination rate is no longer necessary and decides not to impose a maximum mobile voice termination rate, any surcharge applied for regulated roaming calls received shall not exceed the rate set by the most recent delegated act adopted pursuant to Article 75 of that Directive.

Roaming providers shall not apply any surcharge to a regulated roaming SMS message received or to a roaming voicemail message received. This shall be without prejudice to other applicable charges such as those for listening to such messages.

Roaming providers shall charge roaming calls made and received on a per second basis. Roaming providers may apply an initial minimum charging period not exceeding 30 seconds to calls made. Roaming providers shall charge their customers for the provision of regulated data roaming services on a per-kilobyte basis, except for MMS messages, which may be charged on a per-unit basis. In such a case, the retail charge which a roaming provider may levy on its roaming customer for the transmission or receipt of a roaming MMS message shall not exceed the maximum retail charge for regulated data roaming services set out in the first subparagraph.

2. Roaming providers may offer, and roaming customers may deliberately choose, a roaming tariff other than one set in accordance with Articles 4, 5, 6 and paragraph 1 of this Article, by virtue of which roaming customers benefit from a different tariff for regulated roaming services than they would have been accorded in the absence of such a choice. The roaming provider shall remind those roaming customers of the nature of the roaming advantages which would thereby be lost.

Without prejudice to the first subparagraph, roaming providers shall apply a tariff set in accordance with Articles 4 and 5, and paragraph 1 of this Article to all existing and new roaming customers automatically.

Any roaming customer may, at any time, request to switch to or from a tariff set in accordance with Articles 4, 5, 6 and paragraph 1 of this Article. When roaming customers deliberately choose to switch from or back to a tariff set in accordance with Articles 4, 5, 6 and paragraph 1 of this Article, any switch shall be made within one working day of receipt of the request, shall be free of charge and shall not entail conditions or restrictions pertaining to elements of the subscriptions other than roaming. Roaming providers may delay a switch until the previous roaming tariff has been effective for a minimum specified period not exceeding two months.

3. Without prejudice to Part III, Title III of Directive (EU) 2018/1972, roaming providers shall ensure that a retail contract which includes any type of regulated retail roaming service specifies the characteristics of that regulated retail roaming service provided, including in particular:
- (a) the specific tariff plan or tariff plans and, for each tariff plan, the types of services offered, including the volumes of communications;
 - (b) any restrictions imposed on the consumption of regulated retail roaming services provided at the applicable domestic retail price level, in particular quantified information on how any fair use policy is applied by reference to the main pricing, volume or other parameters of the provided regulated retail roaming service concerned;
 - (c) clear and comprehensible information on the conditions and the quality of the roaming service when roaming within the Union in accordance with the BEREC guidelines referred to in paragraph 6.
4. Roaming providers shall ensure that a retail contract which includes any type of regulated retail roaming services provides information about the types of services that may be subject to increased charges when roaming, without prejudice to Article 97 of Directive (EU) 2018/1972.

5. Roaming providers shall publish the information referred to in paragraphs 3 and 4.

In addition, roaming providers shall publish information about reasons why the roaming service is potentially offered under conditions that are less advantageous than those offered domestically. That information shall include factors that can have an impact on the quality of the roaming service to which the roaming customer subscribes, such as network generations and technologies available to the roaming customer in a visited Member State.

6. For the purpose of ensuring the consistent application of this Article, by 1 January 2023, after consulting stakeholders and in close cooperation with the Commission, BEREC shall update its retail roaming guidelines, in particular in regard to the implementation of this Article and the transparency measures referred to in Articles 13, 14 and 15.

Article 9

Wholesale charges for the making of regulated roaming calls

1. The average wholesale charge that the visited network operator may levy on the roaming provider for the provision of a regulated roaming call originating on the visited network, inclusive, *inter alia*, of origination, transit and termination costs, shall not exceed a safeguard limit of EUR 0,022 per minute. That maximum wholesale charge shall decrease to EUR 0,019 per minute on 1 January 2025 and shall, without prejudice to Article 21, remain at EUR 0,019 per minute until 30 June 2032.

2. The average wholesale charge referred to in paragraph 1 shall apply between any pair of operators and shall be calculated over a 12-month period or any shorter period as may remain before the end of the period of application of a maximum average wholesale charge, as provided for in paragraph 1 or before 30 June 2032.
3. The average wholesale charge referred to in paragraph 1 shall be calculated by dividing the total wholesale roaming revenue received by the total number of wholesale roaming minutes actually used for the provision of wholesale roaming calls within the Union by the relevant operator over the relevant period, aggregated on a per-second basis adjusted to take account of the possibility for the operator of the visited network to apply an initial minimum charging period not exceeding 30 seconds.

Article 10

Wholesale charges for regulated roaming SMS messages

1. The average wholesale charge that the visited network operator may levy on the roaming provider for the provision of a regulated roaming SMS message originating on the visited network shall not exceed a safeguard limit of EUR 0,004 per SMS message. That maximum wholesale charge shall decrease to EUR 0,003 per SMS message on 1 January 2025, and shall, without prejudice to Article 21, remain at EUR 0,003 until 30 June 2032.

2. The average wholesale charge referred to in paragraph 1 shall apply between any pair of operators and shall be calculated over a 12-month period or any shorter period as may remain before the end of the period of application of a maximum average wholesale charge, as provided for in paragraph 1 or before 30 June 2032.
3. The average wholesale charge referred to in paragraph 1 shall be calculated by dividing the total wholesale revenue received by the visited network operator or home network operator for the origination and transmission of regulated roaming SMS messages within the Union in the relevant period by the total number of such SMS messages originated and transmitted on behalf of the relevant roaming provider or home network operator within that period.
4. The visited network operator shall not levy any charge on a roaming customer's roaming provider or home network operator, separate from the charge referred to in paragraph 1, for the termination of a regulated roaming SMS message sent to a roaming customer while roaming on its visited network.

Article 11

Wholesale charges for regulated data roaming services

1. The average wholesale charge that the visited network operator may levy on the roaming provider for the provision of regulated data roaming services by means of the visited network shall not exceed a safeguard limit of EUR 2,00 per gigabyte of data transmitted. That maximum wholesale charge shall decrease to EUR 1,80 per gigabyte of data transmitted on 1 January 2023, to EUR 1,55 per gigabyte on 1 January 2024, to EUR 1,30 per gigabyte on 1 January 2025, to EUR 1,10 per gigabyte on 1 January 2026 and to EUR 1,00 per gigabyte by 1 January 2027, after which, without prejudice to Article 21, it shall remain at EUR 1,00 per gigabyte of data transmitted until 30 June 2032.
2. The average wholesale charge referred to in paragraph 1 shall apply between any pair of operators and shall be calculated over a 12-month period or any shorter period as may remain before the end of the period of application of a maximum average wholesale charge, as provided for in paragraph 1 or before 30 June 2032.
3. The average wholesale charge referred to in paragraph 1 shall be calculated by dividing the total wholesale revenue received by the visited network or home network operator for the provision of regulated data roaming services in the relevant period by the total number of megabytes of data actually consumed by the provision of those services within that period, aggregated on a per-kilobyte basis on behalf of the relevant roaming provider or home network operator within that period.

Article 12

Wholesale charges for emergency communications

Without prejudice to Articles 9, 10 and 11, the visited network operator shall not levy on the roaming provider any charges related to any type of emergency communications initiated by the roaming customer or to the transmission of caller location information.

Article 13

Transparency of retail conditions for roaming calls and SMS messages

1. To alert roaming customers to the fact that they will be subject to roaming charges when making or receiving a call or when sending an SMS message, each roaming provider shall, except when the customers have notified the roaming provider that they do not require this service, provide the customers, by means of an automatic message, without undue delay and free of charge, when they enter a Member State other than that of their domestic provider, with basic personalised pricing information on the roaming charges, including VAT, that apply to the making and receiving of calls and to the sending of SMS messages by that customer in the visited Member State.

That basic personalised pricing information shall be expressed in the currency of the home bill provided by the customer's domestic provider and shall include information on:

- (a) any fair use policy that the roaming customer is subject to within the Union and the surcharges which apply in excess of any limits under that fair use policy; and
- (b) any surcharge applied in accordance with Article 6.

Roaming providers shall provide roaming customers, when they enter a Member State other than that of their domestic provider, with information on the potential risk of increased charges due to the use of value-added services by means of an automatic message, without undue delay and free of charge, except where a roaming customer has notified its roaming provider that it does not require this service. Such information shall include a link to access, free of charge, a dedicated webpage providing up-to-date information about the types of services that may be subject to increased costs and, where available, information about numbering ranges for value-added services or other relevant additional information contained in the database established pursuant to Article 16, first paragraph, point (a), in accordance with Article 16, third paragraph. The webpage shall include information about charges applicable to freephone numbers while roaming, if any.

The basic personalised pricing information referred to in the first subparagraph of this paragraph shall also include the free-of-charge number referred to in paragraph 2 for obtaining more detailed information.

On the occasion of each message, customers shall have the opportunity to give notice to the roaming provider, free of charge and in an easy manner, that they do not require the automatic message. Customers who have given notice that they do not require the automatic message shall have the right at any time and free of charge to require the roaming provider to provide the service again.

Roaming providers shall provide customers with disabilities with the basic personalised pricing information referred to in the first subparagraph automatically, by voice call, free of charge, if they so request.

With the exception of the reference to any fair use policy and the surcharge applied in accordance with Article 6, the first, second, fifth and sixth subparagraphs of this paragraph shall also apply both to voice and SMS roaming services used by roaming customers when connecting to national or international non-terrestrial public mobile communications networks, and provided by a roaming provider and to voice and SMS roaming services used by roaming customers travelling outside the Union and provided by a roaming provider.

2. In addition to the information provided for in paragraph 1, customers shall have the right to request and receive, free of charge, and irrespective of their location within the Union, more detailed personalised pricing information on the roaming charges that apply in the visited network to voice calls and SMS messages, and information on the transparency measures applicable by virtue of this Regulation, by means of a mobile voice call or by SMS messages. Such a request shall be to a free-of-charge number designated for this purpose by the roaming provider. Obligations provided for in paragraph 1 shall not apply to devices which do not support SMS functionality.
3. The roaming provider shall send a notification to the roaming customer when the applicable fair use volume of regulated voice, or SMS, roaming services is fully consumed or any usage threshold applied in accordance with Article 6 is reached. That notification shall indicate the surcharge that will be applied to any additional consumption of regulated voice, or SMS, roaming services by the roaming customer. Each customer shall have the right to require the roaming provider to stop sending such notifications and shall have the right, at any time and free of charge, to require the roaming provider to provide the service again.
4. Roaming providers shall provide all customers with full information on applicable roaming charges, when subscriptions are taken out. They shall also provide their roaming customers with updates on applicable roaming charges without undue delay each time there is a change in these charges.

Roaming providers shall send a reminder at reasonable intervals thereafter to all customers who have opted for another tariff.

5. Roaming providers shall make available information to their customers on how to effectively avoid inadvertent roaming in border regions. Roaming providers shall take all reasonable steps to protect their customers from paying roaming charges for inadvertently accessed roaming services while situated in their home Member State.
6. Roaming providers shall take all reasonable steps to protect their customers from paying additional charges for voice calls and SMS messages for inadvertently connecting to non-terrestrial public mobile networks, such as enabling roaming customers to opt out of connecting to non-terrestrial networks. Where such an opt-out mechanism is offered, the roaming customer shall have the right to opt out from the use of non-terrestrial networks at any time, easily and free of charge and to request the reinstatement of the connection to such networks.

Article 14

Transparency and safeguard mechanisms for retail data roaming services

1. Roaming providers shall ensure that their roaming customers, both before and after the conclusion of a retail contract, are kept adequately informed of the charges which apply to their use of regulated data roaming services, in ways which facilitate customers' understanding of the financial consequences of such use and permit them to monitor and control their expenditure on regulated data roaming services in accordance with paragraphs 2 and 4.

Where appropriate, roaming providers shall inform their customers, before the conclusion of a retail contract and on a regular basis thereafter, of the risk of automatic and uncontrolled data roaming connection and download. Furthermore, roaming providers shall notify to their customers, free of charge and in a clear and easily understandable manner, how to switch off those automatic data roaming connections in order to avoid uncontrolled consumption of data roaming services.

2. An automatic message from the roaming provider shall inform the roaming customer that the latter is using regulated data roaming services, and provide basic personalised tariff information on the charges, in the currency of the home bill provided by the customer's domestic provider, applicable to the provision of regulated data roaming services to that roaming customer in the Member State concerned, except where the customer has notified the roaming provider that he does not require that information.

That basic personalised tariff information shall include information on:

- (a) any fair use policy that the roaming customer is subject to within the Union and the surcharges which apply in excess of any limits under that fair use policy; and
- (b) any surcharge applied in accordance with Article 6.

The information shall be delivered directly to the roaming customer's mobile device, for example by an SMS message, an e-mail, means of a text message or a pop-up window on the mobile device, every time the roaming customer enters a Member State other than that of his domestic provider and initiates for the first time a data roaming service in that particular Member State. It shall be provided free of charge at the moment the roaming customer initiates a regulated data roaming service, by an appropriate means adapted to facilitate its receipt and easy comprehension.

A customer who has notified his roaming provider that he does not require the automatic tariff information shall have the right at any time and free of charge to require the roaming provider to provide this service again.

3. The roaming provider shall send a notification when the applicable fair use volume of regulated data roaming service is fully consumed or any usage threshold applied in accordance with Article 6 is reached. That notification shall indicate the surcharge that will be applied to any additional consumption of regulated data roaming services by the roaming customer. Each customer shall have the right to require the roaming provider to stop sending such notifications and shall have the right, at any time and free of charge, to require the roaming provider to provide the service again.
4. Each roaming provider shall grant to all their roaming customers free of charge access to a facility which provides in a timely manner information on the accumulated consumption expressed in volume or in the currency in which the roaming customer is billed for regulated data roaming services and which guarantees that, without the customer's explicit consent, the accumulated expenditure for regulated data roaming services over a specified period of use, excluding MMS messages billed on a per-unit basis, does not exceed a specified financial limit. Customers may notify the roaming provider that they do not require access to such a facility.

To that end, the roaming provider shall make available one or more maximum financial limits for specified periods of use, provided that the customer is informed in advance of the corresponding volume amounts. One of those limits (the default financial limit) shall be close to, but not exceed, EUR 50 of outstanding charges per monthly billing period, excluding VAT.

Alternatively, the roaming provider may establish limits expressed in volume, provided that the customer is informed in advance of the corresponding financial amounts. One of those limits (the default volume limit) shall have a corresponding financial amount not exceeding EUR 50 of outstanding charges per monthly billing period, excluding VAT.

In addition, the roaming provider may offer to its roaming customers other limits with different, that is, higher or lower, maximum monthly financial limits.

The default limits referred to in the second and third subparagraphs shall be applicable to all customers who have not opted for another limit.

Each roaming provider shall also ensure that an appropriate notification is sent directly to the roaming customer's mobile device, for example by an SMS message, an e-mail, means of a text message or a pop-up window on the computer, when the data roaming services have reached 80 % of the agreed financial or volume limit. Each customer shall have the right to require the roaming provider to stop sending such notifications and shall have the right, at any time and free of charge, to require the roaming provider to provide the service again.

When the financial or volume limit would otherwise be exceeded, a notification shall be sent to the roaming customer's mobile device. Where a roaming customer subject to a default financial limit or default volume limit as referred to in the fifth subparagraph consumes more than EUR 100 in a monthly billing period, excluding VAT, an additional notification shall be sent to that roaming customer's mobile device. Those notifications shall indicate the procedure to be followed if the customer wishes to continue provision of those services and the cost associated with each additional unit to be consumed. If the roaming customer does not respond as prompted in the notification received, the roaming provider shall immediately cease to provide and to charge the roaming customer for regulated data roaming services, unless and until the roaming customer requests the continued or renewed provision of those services.

Whenever a roaming customer requests the removal or reinstatement of a financial or volume limit facility, the change shall be made within one working day of receipt of the request, shall be free of charge, and shall not entail conditions or restrictions pertaining to other elements of the subscription.

5. Paragraphs 2 and 4 shall not apply to machine-to-machine devices that use mobile data communication.

6. Roaming providers shall take all reasonable steps to protect their customers from paying roaming charges for inadvertently accessed roaming services while situated in their home Member State. This shall include informing customers on how to effectively avoid inadvertent roaming in border regions.
7. Roaming providers shall take all reasonable steps to protect their customers from paying additional charges for data services for inadvertently connecting to non-terrestrial public mobile networks, such as enabling roaming customers to opt out of connecting to non-terrestrial networks. Where such an opt-out mechanism is offered, the customer shall have the right to opt out from the use of non-terrestrial networks at any time, easily and free of charge, and to request the reinstatement of the connection to such networks.
8. With the exception of paragraph 2, second subparagraph, paragraph 3 and paragraph 6, and subject to the second and third subparagraphs of this paragraph, this Article shall also apply both to data roaming services used by roaming customers when connecting to national or international non-terrestrial public mobile networks provided by a roaming provider and to data roaming services used by roaming customers travelling outside the Union and provided by a roaming provider.

With regard to the facility referred to in paragraph 4, first subparagraph, the requirements provided in paragraph 4 shall not apply if the visited network operator in the visited country outside the Union does not allow the roaming provider to monitor its customers' usage on a real-time basis.

In such a case the customer shall be notified by an SMS message when entering such a country, without undue delay and free of charge, that information on accumulated consumption and the guarantee not to exceed a specified financial limit are not available.

Article 15

Transparency with regard to the means of access to emergency services

Roaming providers shall ensure that their roaming customers are kept adequately informed about the means of access to emergency services in the visited Member State.

The roaming provider shall inform the roaming customer, by means of an automatic message, that the latter may access emergency services free of charge by calling the single European emergency number '112'. That message shall also provide the roaming customer with a link to access, free of charge, a dedicated webpage, accessible to persons with disabilities, which provides information on alternative means of access to emergency services through emergency communications mandated in the visited Member State. The information shall be delivered to the roaming customer's mobile device by an SMS message or where necessary by an appropriate means adapted to facilitate its receipt and easy comprehension every time a roaming customer enters a Member State other than that of the roaming customer's domestic provider. The information shall be provided free of charge.

In Member States where public warning mobile applications are deployed, if a link to that application is reported by the visited Member State in the database established pursuant to Article 16, first paragraph, point (b), roaming providers shall include, in the message referred to in the second paragraph of this Article, the information indicating that public warnings may be received by a public warning mobile application. A link to the public warning mobile application and instructions for its download shall be provided in the dedicated webpage referred to in the second paragraph of this Article.

Article 16

Databases of numbering ranges for value-added services and means of access to emergency services

By 31 December 2022, BEREC shall establish, and subsequently maintain:

- (a) a single, Union-wide database of numbering ranges for value-added services in each Member State, to be made accessible to operators, national regulatory authorities and, where applicable, to other competent authorities; and
- (b) a single, Union-wide database of means of access to emergency services that are mandated in each Member State and that are technically feasible to be used by roaming customers, to be made accessible to operators and national regulatory authorities and, where applicable, to other competent authorities.

For the purposes of the establishment and maintenance of the databases referred to in the first paragraph, the national regulatory authorities or other competent authorities shall provide the necessary information and the relevant updates to BEREC by electronic means without undue delay.

Without prejudice to Article 13, the databases referred to in the first paragraph shall enable national regulatory authorities and other competent authorities, on an optional basis, to provide additional information.

Article 17

Supervision and enforcement

1. National regulatory authorities and, where applicable, other competent authorities shall monitor and supervise compliance with this Regulation within their territory.

National regulatory authorities shall strictly monitor and supervise roaming providers availing themselves of Articles 5 and 6.

Where applicable, other competent authorities shall monitor and supervise compliance by the operators with the obligations laid down in this Regulation which are relevant for the exercise of the powers conferred on them by national law transposing Directive (EU) 2018/1972.

2. National regulatory authorities and, where applicable, other competent authorities and BEREC shall make up-to-date information on the application of this Regulation, in particular Articles 4, 5, 6 and 8 to 11, publicly available in a manner that enables interested parties to have easy access to it.
3. National regulatory authorities and, where applicable, other competent authorities shall, in accordance with their respective competences, in preparation for the review provided for in Article 21, monitor developments in wholesale and retail charges for the provision to roaming customers of voice and data communications services, including SMS and MMS, including in the outermost regions referred to in Article 349 of the Treaty on the Functioning of the European Union. National regulatory authorities and, where applicable, other competent authorities shall also be alert to the particular case of inadvertent roaming in the border regions of neighbouring Member States and monitor whether traffic-steering techniques are used to the disadvantage of customers.

National regulatory authorities and, where applicable, other competent authorities shall monitor and collect information on inadvertent roaming and take appropriate measures.

4. National regulatory authorities and, where applicable, other competent authorities shall have the power to require undertakings subject to obligations under this Regulation to supply all information relevant to the implementation and enforcement of this Regulation. Those undertakings shall provide such information promptly on request and in accordance with time limits and level of detail required by the national regulatory authority and, where applicable, other competent authorities.
5. Where a national regulatory authority or other competent authorities considers information to be confidential in accordance with Union and national rules on business confidentiality, the Commission, BEREC and any other national regulatory authority or other competent authority concerned shall ensure such confidentiality. Business confidentiality shall not prevent the timely sharing of information between the national regulatory authority or other competent authorities, the Commission, BEREC and any other national regulatory authorities or other competent authorities concerned, for the purposes of reviewing, monitoring and supervising the application of this Regulation.

6. National regulatory authorities shall be empowered to intervene on their own initiative in order to ensure compliance with this Regulation. National regulatory authorities or other competent authorities in the situations referred to under Article 61(2), points (b) and (c), of Directive (EU) 2018/1972, shall, where necessary, make use of the powers under Article 61 of that Directive to ensure adequate access and interconnection in order to guarantee the end-to-end connectivity and interoperability of roaming services, for example where customers are unable to exchange regulated roaming SMS messages with customers of a terrestrial public mobile communications network in another Member State as a result of the absence of a wholesale roaming agreement enabling the delivery of those messages.
7. Where a national regulatory authority or, where applicable for the exercise of the powers conferred on them by national law transposing Directive (EU) 2018/1972, other competent authorities find that a breach of the obligations set out in this Regulation has occurred, it shall have the power to require the immediate cessation of such a breach.

Article 18

Dispute resolution

1. In the event of a dispute in connection with the obligations laid down in this Regulation between undertakings providing electronic communications networks or services in a Member State, the dispute resolution procedures laid down in Articles 26 and 27 of Directive (EU) 2018/1972 shall apply.

Disputes between visited network operators and other operators on rates applied to inputs necessary for the provision of regulated wholesale roaming services may be referred to the competent national regulatory authority or authorities pursuant to Articles 26 and 27 of the Directive (EU) 2018/1972. The competent national regulatory authority or authorities shall notify any cross-border dispute to BEREC in order to bring about a consistent resolution of the dispute. Where BEREC has been consulted, the competent national regulatory authority or authorities shall await BEREC's opinion before taking action to resolve the dispute.

2. In the event of an unresolved dispute involving a consumer or end-user and concerning an issue falling within the scope of this Regulation, the Member States shall ensure that the out-of-court dispute resolution procedures laid down in Article 25 of Directive (EU) 2018/1972 are available.

Article 19

Penalties

Member States shall lay down the rules on penalties applicable to infringements of this Regulation and shall take all measures necessary to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. Member States shall notify the Commission of those rules and measures and of any subsequent amendment affecting them without delay.

Article 20
Committee procedure

1. The Commission shall be assisted by the Communications Committee established by Article 118(1) of Directive (EU) 2018/1972. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.
2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Article 21
Review

1. The Commission shall, after consulting BEREC, submit two reports to the European Parliament and to the Council, followed, if appropriate, by a legislative proposal to amend this Regulation.

The first such report shall be submitted by 30 June 2025 and the second by 30 June 2029.

The reports shall include, *inter alia*, an assessment of:

- (a) the impact of the roll-out and implementation of next generation mobile communications networks and technologies on the roaming market;

- (b) the effectiveness of the quality of service obligations with regard to roaming customers, the availability and quality of services, including those which are an alternative to regulated retail voice, SMS and data roaming services, in particular in light of technological developments and of the access to the different network technologies and generations;
- (c) the degree of competition in both the retail and wholesale roaming markets, in particular the actual wholesale rates paid by the operators and the competitive situation of small, independent or newly started operators, and MVNOs, including the competition effects of commercial wholesale roaming agreements, of traffic traded on trading platforms and similar instruments and the degree of interconnection between operators;
- (d) the evolution of the machine-to-machine roaming, including roaming on IoT devices;
- (e) the extent to which the implementation of the measures provided for in Article 3, in particular on the basis of the information provided by the national regulatory authorities, of the procedure for prior authorisation laid down in Article 3(6), has produced results in the development of competition in the internal market for regulated roaming services;
- (f) the evolution of the retail tariff plans available;

- (g) changes in data consumption patterns for both domestic and roaming services, including changes in travel patterns of European end-users caused by circumstances such as pandemics, for example COVID-19, or natural disasters;
- (h) the ability of home network operators to sustain their domestic charging model and the extent to which exceptional retail roaming surcharges have been authorised pursuant to Article 6;
- (i) the ability of visited network operators to recover the efficiently incurred costs of providing regulated wholesale roaming services, taking into account the latest information on network deployment, as well as developments in technical capabilities, pricing models and constraints of the networks, for instance the possibility of including cost model calculations based on capacity rather than consumption;
- (j) the impact of the application of fair use policies by operators, including on consumption by end-users, in accordance with the implementing acts adopted pursuant to Article 7, including the identification of any inconsistencies in the application and implementation of such fair use policies; as well as the effectiveness and proportionality of the general application of such policies;

- (k) the extent to which roaming customers and operators face problems in relation to value-added services and the implementation of the database of numbering ranges for value-added services established pursuant to Article 16, first paragraph, point (a);
- (l) the application of the measures of this Regulation and complaints related to the use of emergency communications while roaming;
- (m) complaints related to inadvertent roaming.

2. In order to assess competitive developments in Union-wide roaming markets, BEREC shall collect data regularly from national regulatory authorities on developments in retail and wholesale charges for regulated voice, SMS and data roaming services, including wholesale charges applied for balanced and unbalanced roaming traffic respectively, on the impact of the roll-out and implementation of next generation mobile communications networks and technologies on the roaming market, on the use of trading platforms and similar instruments, on the development of machine-to-machine roaming and IoT devices, and on the extent to which wholesale roaming agreements cover quality of service and give access to different network technologies and generations. Where applicable, the national regulatory authorities may provide such data in coordination with other competent authorities.

BEREC shall also collect data regularly from national regulatory authorities on the application of fair use policies by operators, the developments of domestic-only tariffs, the application of the sustainability mechanisms and complaints on roaming and compliance with the quality of service obligations. Where appropriate, national regulatory authorities shall coordinate with and collect such data from other competent authorities. BEREC shall regularly collect and provide additional information on transparency, on the application of measures on emergency communication, on value-added services and on roaming on non-terrestrial public mobile communications networks.

BEREC shall also collect data on the wholesale roaming agreements not subject to the maximum wholesale roaming charges provided for in Article 9, 10 or 11 and on the implementation of contractual measures at wholesale level aiming to prevent permanent roaming or anomalous or abusive use of wholesale roaming access for purposes other than the provision of regulated roaming services to roaming providers' customers while the latter are periodically travelling within the Union.

The data collected by BEREC pursuant to this paragraph shall be notified to the Commission at least once a year. The Commission shall make them public.

By 30 June 2027, the Commission shall submit an interim report to the European Parliament and to the Council, based on the data collected by BEREC pursuant to this paragraph, followed, if appropriate, by a legislative proposal to amend this Regulation.

On the basis of data collected pursuant to this paragraph, BEREC shall report regularly on the evolution of pricing and consumption patterns in the Member States both for domestic and roaming services, the evolution of actual wholesale roaming rates for unbalanced traffic between providers of roaming services, and on the relationship between retail prices, wholesale charges and wholesale costs for roaming services. BEREC shall assess how closely those elements relate to each other.

Article 22

Notification requirements

Member States shall notify to the Commission the identity of the national regulatory authorities and, where relevant, of other competent authorities responsible for carrying out tasks under this Regulation.

Article 23

Repeal

Regulation (EU) No 531/2012 is repealed.

References to the repealed Regulation shall be construed as references to this Regulation and shall be read in accordance with the correlation table in Annex II.

Article 24
Entry into force and expiry

This Regulation shall enter into force on 1 July 2022.

However, the obligations of roaming providers to provide information about numbering ranges for value added services as referred to in Article 13(1), third subparagraph, and information about alternative means of access to emergency services as referred to in Article 15, second paragraph with regard to the information in the databases referred to in Article 16 shall apply from 1 June 2023.

This Regulation shall expire on 30 June 2032.

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

Done at ...,

For the European Parliament
The President

For the Council
The President

ANNEX I

Repealed Regulation with list of the successive amendments thereto

Regulation (EU) No 531/2012 of the European Parliament and of the Council (OJ L 172, 30.6.2012, p. 10)	
Regulation (EU) 2015/2120 of the European Parliament and of the Council (OJ L 310, 26.11.2015, p. 1)	Only Article 7
Regulation (EU) 2017/920 of the European Parliament and of the Council (OJ L 147, 9.6.2017, p. 1)	

ANNEX II

Correlation table

Regulation (EU) No 531/2012	This Regulation
Article 1(1)	Article 1 (1)
Article 1(2)	-
Article 1(3)	Article 1(2)
Article 1(4)	-
Article 1(5)	Article 1(3)
Article 1(6)	Article 1(4)
Article 1(7)	-
Article 2(1)	Article 2(1)
Article 2(2) (a) and (b)	Article 2(2) (a) and (b)
Article 2(2)(c)	-
Article 2(2)(d)	Article 2(2)(c)
Article 2(2)(e)	Article 2(2)(d)
Article 2(2)(f)	Article 2(2)(e)
Article 2(2)(g)	Article 2(2)(f)

Regulation (EU) No 531/2012	This Regulation
Article 2(2)(h)	Article 2(2)(g)
Article 2(2)(j)	Article 2(2)(h)
Article 2(2)(k)	Article 2(2)(i)
Article 2(2)(m)	Article 2(2)(j)
Article 2(2)(o)	Article 2(2)(k)
Article 2(2)(p)	Article 2(2)(l)
Article 2(2)(q)	Article 2(2)(m)
Article 2(2)(r)	Article 2(2)(n)
Article 2(2)(s)	-
Article 3(1) to (8)	Article 3(1) to (8)
Article 3(9)	-
Article 4	-
Article 5	-
Article 6	Article 20
Article 6a	Article 4(1)
-	Article 4(2)
-	Article 4(3)

Regulation (EU) No 531/2012	This Regulation
Article 6b	Article 5
Article 6c	Article 6
Article 6d(1), (2) and (3)	Article 7(1), (2) and (3)
Article 6d(4)	Article 7(1), third subparagraph
Article 6d(5)	Article 7(4)
-	Article 7(5)
Article 6e(1), first subparagraph, introductory wording	Article 8(1), first subparagraph, introductory wording
Article 6e(1)(a)	Article 8(1)(a)
Article 6e (1)(b)	-
Article 6e (1)(c)	Article 8 (1)(b)
Article 6e (1), second subparagraph	Article 8 (1), second and third subparagraphs
Article 6e (1), third subparagraph	Article 8 (1), fourth subparagraph
Article 6e (1), fourth subparagraph	Article 8 (1), second subparagraph
Article 6e(2)	-
Article 6e(3)	Article 8(2)
Article 6e(4), first subparagraph, introductory wording	Article 8(3), introductory wording
Article 6e(4), first subparagraph, (a) and (b)	Article 8(3)(a) and (b)
-	Article 8(3)(c)
-	Article 8(4)

Regulation (EU) No 531/2012	This Regulation
Article 6e(4), second subparagraph	Article 8(5)
-	Article 8 (6)
Article 6f	-
Article 7	Article 9
Article 9	Article 10
Article 11	-
Article 12	Article 11
-	Article 12
Article 14(1), first and second subparagraphs	Article 13(1), first and second subparagraphs
-	Article 13(1), third subparagraph
Article 14(1), third and fourth subparagraphs	Article 13(1), fourth and fifth subparagraphs
Article 14(1), third subparagraph	Article 15(2)
Article 14(1), fifth and six subparagraphs	Article 13(1), sixth and seventh subparagraphs
Article 14(2)	Article 13(2)
Article 14(2a)	Article 13(3)
Article 14(3)	Article 13(4)
-	Article 13(6)
Article 14(4)	Article 13(5)
Article 15(1) and (2)	Article 14(1) and (2)
Article 15 (2a)	Article 14(3)

Regulation (EU) No 531/2012	This Regulation
Article 15(3)	Article 14(4)
Article 15(4)	Article 14(5)
Article 15(5)	Article 14(6)
-	Article 14(7)
Article 15(6)	Article 14(8)
-	Article 15
-	Article 16
Article 16 (1) to (4)	Article 17 (1) to (4)
Article 16 (4a)	Article 17 (5)
Article 16 (5)	Article 17 (6)
Article 16 (6)	Article 17 (7)
Article 17	Article 18
Article 18	Article 19
Article 19(1)	-
Article 19(2)	-
Article 19(3) first subparagraph	Article 21(1) first and second subparagraph
-	Article 21(1), third subparagraph, (a)
Article 19(3) second subparagraph (a) and (b)	Article 21(1) third subparagraph (b) and (c)
-	Article 21(1) third subparagraph (d)
Article 19(3)(c)	Article 21(1) third subparagraph (e)

Regulation (EU) No 531/2012	This Regulation
Article 19(3)(d)	Article 21(1) third subparagraph (f)
Article 19(3)(e)	Article 21(1) third subparagraph (g)
Article 19(3)(f)	Article 21(1) third subparagraph (h)
Article 19(3)(g)	Article 21(1) third subparagraph (i)
Article 19(3)(h)	Article 21(1) third subparagraph (j)
-	Article 21(1) third subparagraph (k)
-	Article 21(1) third subparagraph (l)
-	Article 21(1) third subparagraph (m)
Article 19(4) first subparagraph	Article 21(2) first and third subparagraphs
Article 19(4) second subparagraph	Article 21(2) fourth subparagraph
-	Article 21(2) fifth subparagraph
Article 19(4) third subparagraph	Article 21(2) sixth subparagraph
Article 19(4) fourth subparagraph	Article 21(2) second subparagraph
Article 20	Article 22
Article 21	Article 23
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-	
Annex I	Annex I
Annex II	Annex II