Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of
The Uniendo a Puerto Rico Fund and the Connect USVI Fund
Connect America Fund
WC Docket No. 18-143
WC Docket No. 10-90

DECLARATORY RULING

Adopted: July 6, 2022
Released: July 6, 2022

By the Chief, Wireline Competition Bureau:

I. INTRODUCTION

1. In this Declaratory Ruling, the Wireline Competition Bureau (Bureau), in consultation with the Wireless Telecommunications Bureau, clarifies that mobile high-cost support authorized by Stage 2 of the Bringing Puerto Rico Together Fund and the Connect USVI Fund may permissibly be used to deploy indoor distributed antenna systems (DAS)\(^1\) to further the Commission’s goal towards resilient and hardened networks in Puerto Rico and the U.S. Virgin Islands to protect against future natural disasters, with certain limitations as described herein.

II. BACKGROUND

2. In September 2017, Hurricanes Irma and Maria caused extensive damage to infrastructure throughout the Territories, destroying communications networks and leaving residents without essential lines of communication during and after these dangerous storms. In response, the Commission allocated nearly $1 billion in Universal Service Fund support to facilitate and harden deployment of advanced fixed and mobile broadband networks in the Territories.\(^2\) The Commission adopted, among other initiatives,

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\(^1\) The Commission has described DAS as a network that “distributes RF signals from transceivers at a central hub to a specific service area with poor coverage or inadequate capacity.” *Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies et al.*, Report and Order, 29 FCC Rcd 12865, 12879, para. 31 (2014) (*2014 Infrastructure Order*). The purpose of a DAS network is “[t]o meet localized needs for coverage and increased capacity in outdoor and indoor environments.” *Id.* at 12878, para. 29; *accord id.* at 12876, para. 23 (stating that DAS networks “can be deployed on a variety of non-traditional structures[,] such as . . . inside buildings, to enhance capacity or fill in coverage gaps”); *see also Communications Marketplace Report, 2020 Communications Marketplace Report, 36 FCC Rcd 2945, 2970, para. 35 (2020) (stating that mobile service providers use DAS networks “to fill local coverage gaps, to densify networks and increase local capacity, and to build their 5G networks”). The Commission noted that, “[a]s typically configured, a DAS network consists of: (1) a number of remote communications nodes deployed throughout the desired coverage area, each including at least one antenna for transmission and reception; (2) a high capacity signal transport medium (typically fiber optic cable) connecting each node to a central communications hub site; and (3) radio transceivers located at the hub site (rather than at each individual node as is the case for small cells) to process or control the communications signals transmitted and received through the antennas.” *2014 Infrastructure Order*, 29 FCC Rcd at 12879, para. 31.

\(^2\) *The Uniendo a Puerto Rico Fund and the Connect USVI Fund*, Report and Order and Order on Reconsideration, 34 FCC Rcd 9109, 9110, paras. 1-3 (2019) (*PR-USVI Stage 2 Order*).
the PR-USVI Stage 2 Order to facilitate deployment of modern, high-speed, and storm-hardened advanced telecommunications, which includes more than $250 million over three years in mobile high-cost support.\(^3\)

3. The PR-USVI Stage 2 Order allowed eligible facilities-based mobile providers a one-time election of support for a three-year funding period\(^4\) with support based on their relative subscriber counts in the Territories before the hurricanes.\(^5\) An eligible mobile provider could elect to receive up to 75% of its total support allocated in the PR-USVI Stage 2 Order to restore, harden, and expand networks capable of providing 4G LTE or better services at outdoor data transmission rates of at least 10/1 Mbps.\(^6\) An eligible mobile provider could also elect to receive up to 25% of its total eligible support allocated in the PR-USVI Stage 2 Order to specifically deploy networks capable of providing 5G-NR service at outdoor data transmission rates of at least 35/3 Mbps.\(^7\) Where a recipient uses its high-cost support to harden its network, the recipient is required to demonstrate how it used the support by annually submitting a map and detailed narrative description of its network hardening activities from the prior calendar year.\(^8\) At the end of the three-year term of support, each mobile support recipient must have restored its mobile network coverage to areas that are equal to or greater than 100% of its pre-hurricane coverage,\(^9\) when compared with its June 2017 FCC Form 477 coverage data.\(^10\) Each mobile provider must return any Stage 2 high-cost support not used to restore, expand, and harden its 4G LTE and 5G-NR networks.\(^11\)

4. On April 7, 2022, T-Mobile filed a Petition for Declaratory Ruling (Petition) requesting that the Commission clarify that the Stage 2 rules permit mobile high-cost support to be used for the deployment of DAS within buildings.\(^12\) T-Mobile states that deploying DAS would make its mobile

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3 PR-USVI Stage 2 Order, 34 FCC Rcd at 9110, para. 3.
5 PR-USVI Stage 2 Order, 34 FCC Rcd at 9162-63, para. 101. Subscriber counts were based on June 2017 FCC Form 477 data. 47 CFR § 54.1509(c); PR-USVI Stage 2 Order, 34 FCC Rcd at 9164-65, paras. 106-07.
6 47 CFR §§ 54.1509(c), 54.1514(b)(1); see also PR-USVI Stage 2 Order, 34 FCC Rcd at 9171, para. 122 (discussing 4G LTE).
7 47 CFR §§ 54.1509(c), 54.1514(b)(2); see also PR-USVI Stage 2 Order, 34 FCC Rcd at 9172, para. 124 (discussing 5G-NR).
8 47 CFR § 54.1514(d).
9 Id. § 54.1513(b).
10 See id. §§ 54.1509(c), 54.1510.
11 47 CFR § 54.1509(d); PR-USVI Stage 2 Order, 34 FCC Rcd at 9172, para. 125.
12 See Petition of T-Mobile USA, Inc. for Declaratory Ruling, WC Docket No. 18-143, at 1, 7 (filed Apr. 7, 2022) (Petition); Wireline Competition Bureau Seeks Comment on Petition for Declaratory Ruling Filed by T-Mobile, WC Docket No. 18-143, Public Notice, DA 22-426, at 1 (WCB Apr. 18, 2022). Although T-Mobile does not expressly limit its requested clarification to the use of Stage 2 support for the indoor deployment of DAS, we interpret the Petition in that manner because T-Mobile’s stated rationale for the clarification is that the DAS networks would be used in buildings. See Petition at 4-5 (stating that the use of Stage 2 support for DAS deployments is consistent with the Stage 2 rules because “DAS-based networks approved in buildings would remain operational with redundant
networks more resilient in a disaster, consistent with the goals of the PR-USVI Stage 2 Order. In response, the Telecommunications Board of Puerto Rico (TBPR) and the Wireless Infrastructure Association (WIA) each filed comments generally supporting the Petition, and T-Mobile filed a reply addressing some additional considerations raised by the TBPR.

III. DISCUSSION

5. The Commission may issue a declaratory ruling to terminate a controversy or remove uncertainty. We use this Declaratory Ruling to clarify that a mobile support recipient may use Stage 2 support to deploy DAS inside particular facilities or particular types of facilities, as listed in the Appendix, when deployed in a manner that hardens its network by providing network resiliency and redundancy, as described herein.

A. Appropriate Buildings For Use of Support

6. The PR-USVI Stage 2 Order sought full restoration and hardening against disasters of mobile networks in Puerto Rico and the U.S. Virgin Islands while facilitating deployment of 4G LTE and 5G-NR. Specifically, the Commission requires support to be used solely for “[d]eployment, replacement, and upgrade at 4G LTE or better technological network level” and “[h]ardening of 4G LTE or better network facilities to help prevent future damage from natural disasters.” While the Commission required mobile recipients to commit to the full restoration of their pre-hurricane network coverage with minimum outdoor data transmission rates, nothing in the Commission’s rules limits the appropriate use of high-cost mobile support solely for outdoor deployments.

7. While we are committed to ensuring the restoration and expansion of telecommunications networks in the Territories, we are mindful that the Bringing Puerto Rico Together Fund and the Connect USVI Fund exist within the greater universal service framework. This framework ensures that high-cost support allows for communications networks to have universal reach to consumers who otherwise may not receive such networks through market forces alone.

8. The record shows a general consensus regarding which buildings should be eligible for universal service-supported DAS deployments, but commenters disagree on the specific priorities for DAS deployments. T-Mobile states that it would use the support to target facilities that were crucial during Hurricane Maria or similar emergencies and provides a list of buildings that would be appropriate for indoor DAS deployments using Stage 2 support. TBPR agrees with T-Mobile’s list of buildings, but (Continued from previous page) signal sources and power even if the surrounding network is not operational,” thereby making them more resilient in the event of emergencies).

13 Petition at 1, 7.
14 TBPR Comments.
15 WIA Comments.
16 T-Mobile Reply.
17 47 CFR § 1.2(a); accord 5 U.S.C. § 554(e).
18 PR-USVI Stage 2 Order, 34 FCC Rcd at 9110, 9165, 9170-72, paras. 2, 107, 121, 124.
19 47 CFR § 54.1511(a).
20 Id. § 54.1511(b). In addition to FCC Form 477 data submissions, mobile-provider recipients of Stage 2 funding must also submit a map reporting where they have hardened the network. Id. § 54.1514(d).
21 Id. §§ 54.1513, 54.1514(b).
23 Petition at 5, Appx. A (providing a preliminary list of potential DAS locations, which include specific emergency operation shelters, town halls, other governmental buildings, and hospitals).
TBPR is concerned that T-Mobile’s listed locations are limited to heavily populated areas. TBPR requests that the Commission also direct T-Mobile to provide [TBPR] with a map of planned installation locations and that T-Mobile be required to deploy DAS in the aforementioned underserved regions of Puerto Rico,” specifically mentioning the need for DAS in the “Emergency Management Bureau Zones” and the “hospitals in Adjuntas, Moca, Utuado, and Aibonito.” T-Mobile responds that “adding additional requirements . . . at this late stage could unnecessarily delay deployment” and that “there is no basis to add new burdensome obligations based on a petition for declaratory ruling.”

9. We consider here which indoor DAS deployments would be consistent with the Commission’s rules and universal service principles regarding the appropriate, cost effective, and efficient use of Stage 2 support. For instance, support for indoor DAS in some building types may do little to help the public at large or are best left for market solutions, such as enterprise buildings. In other instances, some public buildings are appropriate for use of Stage 2 support when deployments within them are consistent with our goal to ensure telecommunications service during natural disasters and emergencies or when service to such buildings extends network access within rural or insular areas. In this regard, we clarify that PR-USVI Stage 2 Order universal service funds are presumptively appropriate for deploying DAS to public or publicly accessible facilities that aid disaster response, including hospitals, police and fire stations, town halls, a government office responsible for emergency management and disaster administration or any municipal equivalent, community centers, and any additional buildings listed in the Appendix to this Declaratory Ruling.

24 TBPR Comments at 2.
25 Id. at 2. TBPR did not define or clarify the term “Emergency Management Bureau Zones.”
26 Id.
27 T-Mobile Reply at 3.
28 See 47 U.S.C. § 254(b)(3) (providing that a principle of universal service is to provide telecommunications and information services universally to consumers, including to rural and insular areas, that are reasonably comparable to those in urban areas), (b)(7) (stating that “the Commission shall base policies for the preservation and advancement of universal service” on several principles, including such principles as it “determine[s] are necessary and appropriate for the protection of the public interest, convenience, and necessity”). Stage 2 mobile support is appropriately used for “(a) Deployment, replacement, and upgrade at 4G LTE or better technological network level, as specified in this part; and (b) Hardening of 4G LTE or better network facilities to help prevent future damage from natural disasters.” 47 CFR § 54.1511(a), (b).
31 All eligible buildings must provide a benefit to the public during a disaster. Some buildings may be privately owned—such as stadiums or some hospitals—but are places where the public will congregate during a disaster and, therefore, have an overwhelming need for a working communications network during emergency conditions. Other buildings may be eligible—not because the public would congregate there—because public officials coordinate disaster response from particular buildings. See, e.g., Petition at 5 (“DAS deployments will be targeted to areas that were crucial in Hurricane Maria or similar emergencies to ensure that, if another hurricane strikes, services will be maintained at these key critical areas. In particular, the sites in Appendix A include emergency operations centers, town halls, police stations, and hospitals. In past emergencies, including Hurricane Maria, these locations were critical because they promote public safety and security.”); TBPR Comments at 2. T-Mobile notes that the buildings in its Appendix A are a preliminary list and that it may supplement the list in the event that new emergency sites are designated by government officials that are used during future emergencies. Petition at 5 n.15. The Commission will continue to monitor the situation and will remain flexible where warranted.
32 E.g., La Oficina Municipal para el Manejo de Emergencias y Administración de Desastres; see TBPR Comments at 2 (requesting inclusion of Emergency Management Bureau Zones and expressing concern about DAS deployments to rural areas).
33 See Petition, Appx. A; TBPR Comments at 2.
buildings already have a DAS as of the release of this ruling, we find that such buildings are not presumptively appropriate for DAS deployment using Stage 2 funds. However, Stage 2 funds can be used to harden the already-existing DAS.\textsuperscript{34}

10. We conclude that Stage 2 support for indoor DAS deployment is appropriate only for public or publicly accessible buildings that protect the public during disasters where the market would otherwise not support DAS deployment. Our presumptive list includes buildings responsive to TBPR’s concerns,\textsuperscript{35} while also including all of the buildings listed by T-Mobile.\textsuperscript{36} Consistent with the universal service framework to ensure that communications networks reach rural and insular areas,\textsuperscript{37} we agree with commenters that all potential areas that may benefit from DAS deployments should be considered, including hospitals in rural areas identified by the TBPR.\textsuperscript{38} We strongly encourage all Stage 2 fund recipients to work with local officials to determine the feasibility and viability of DAS deployments to the rural hospitals listed in the Appendix in light of their importance of providing critical infrastructure and telecommunication services to rural communities during a disaster.\textsuperscript{39}

B. Required Capabilities for Stage 2 Support

11. In the PR-USVI Stage 2 Order, the Commission aimed to ensure that Puerto Rico and the U.S. Virgin Islands can withstand future hurricanes and other disasters.\textsuperscript{40} To this end, PR-USVI Stage 2 Order funds are appropriately used for hardening when an indoor DAS network allows mobile services to remain operational, even if surrounding outdoor networks fail.\textsuperscript{41} T-Mobile notes that DAS-based networks add resiliency to its LTE and 5G networks “because DAS-based networks approved in buildings would remain operational with redundant signal sources and power even if the surrounding network is not operational.”\textsuperscript{42} T-Mobile further notes that “[i]ncreasing signal quality indoors is critical during natural disasters, when customers cannot safely venture outside to make or receive emergency communications.”\textsuperscript{43}

12. We agree with T-Mobile and commenters that DAS networks deployed indoors can add resiliency and redundancy to communications networks during a disaster. In the PR-USVI Stage 2 Order, the Commission provided that network resilience refers to “the ability of network facilities to recover quickly from damage to its components or to any of the external systems on which it depends.”\textsuperscript{44}

\textsuperscript{34} See Section III.B, \textit{infra}.

\textsuperscript{35} See TBPR Comments at 1-2 (requesting DAS deployments in Emergency Management Bureau Zones and hospitals in particular rural areas).

\textsuperscript{36} T-Mobile Reply at 3-4.

\textsuperscript{37} 47 U.S.C. § 254(b)(3).

\textsuperscript{38} See TBPR Comments at 2; Letter from Indra Sehdev Chalk, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 18-143, at 2 (filed June 24, 2022) (T-Mobile \textit{Ex Parte}).

\textsuperscript{39} T-Mobile \textit{Ex Parte} at 2.

\textsuperscript{40} See 47 CFR § 54.1511; PR-USVI Stage 2 Order, 34 FCC Rcd at 9110, 9165, 9170-71, paras. 2, 107, 121.

\textsuperscript{41} See \textit{PR-USVI Stage 2 Order}, 34 FCC Rcd at 9124, para. 27 (“[W]e believe it is important to explicitly consider resilience, network hardening, and disaster preparation in our support determinations.”).

\textsuperscript{42} Petition at 4-5.

\textsuperscript{43} Petition at 5. WIA and TBPR filed comments agreeing that DAS deployments contribute to resiliency of communications networks during a disaster. See TBPR Comments at 2; WIA Comments at 1.

\textsuperscript{44} \textit{PR-USVI Stage 2 Order}, 34 FCC Rcd at 9125, para. 28. While we recognize the Commission’s detailed discussion of resiliency and redundancy of hardened networks occurred in the context of the scoring for competitive process for Stage 2 fixed support, these principles of network hardening nevertheless apply to mobile networks.
Further, “resilience-improving measures do not absolutely prevent damage”\(^{45}\) and instead “enable network facilities to continue operating despite damage and/or promote a rapid return to normal operations when damage does occur.”\(^{46}\) The Commission similarly noted the value of redundancy, i.e., a backup network or path redundancy, as a component of a storm-hardened network.\(^{47}\) For an indoor DAS deployment to be constructed consistent with the PR-USVI Stage 2 Order, it must be capable of remaining operational independent of the communications network outside the building; otherwise, the DAS network would not be adding any hardening benefit to what the surrounding mobile service would provide during a disaster. To this end, we would expect the DAS would not include single points of failure, thus negating the benefits of resiliency and redundancy of the system. The indoor DAS need to have their own power systems and buried lines and must not share any resources, including backhaul, with the network in the surrounding area.\(^{48}\)

**C. Certification**

13. The PR-USVI Stage 2 Order requires mobile support recipients to certify that their transmissions meet or exceed minimum service requirements specified in the Order.\(^{49}\) We make clear that nothing in this declaratory ruling disturbs the minimum service requirements and related certification requirements adopted by the Commission for mobile transmissions (both indoor and outdoor) with respect to Stage 2 support.

14. The Commission’s codified rule requires that the recipients of mobile support certify that they are providing minimum outdoor transmission speeds of at least 10/1 Mbps for 4G LTE service or at least 35/3 Mbps for 5G-NR service.\(^{50}\) T-Mobile argues that “[t]he fact that the rules’ standards are defined with reference to ‘outdoor data transmission rates’ does not mean that Stage 2 support cannot be used to invest in hardening mobile networks, making them more resilient, and making them more reliable when customers may be indoors.”\(^{51}\) T-Mobile confirms “that no later than thirty days after the end of the third year of Stage 2 support, it will report and certify that its mobile transmissions meet or exceed the Commission’s requirements, just like any Stage 2 mobile support recipient is required to do, regardless of whether they use DAS.”\(^{52}\)

15. We agree with T-Mobile that where funds are used for indoor deployments, a certification is necessary, just like other Stage 2 support.\(^{53}\) T-Mobile, and any other Stage 2 mobile support recipient, must report and certify to its mobile transmissions for DAS deployments no later than

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\(^{45}\) Id.

\(^{46}\) Id.

\(^{47}\) Id. at 9128-29, para. 32.

\(^{48}\) See Petition at 4-5 (“That is because DAS-based networks approved in buildings would remain operational with redundant signal sources and power even if the surrounding network is not operational.”); id. at 2. We also expect that DAS and similar types of indoor mobile networks, particularly when such networks are built using universal service funds, will be integrated into Roaming under Disaster agreements and such facilities will be freely shared during disasters. See generally Improving the Resiliency of Mobile Wireless Communications Networks; Reliability and Continuity of Communications Networks, Including Broadband Technologies, PS Docket No. 11-60, Order, 31 FCC Rcd 13745 (2016) (expressing support for a voluntary Wireless Resiliency Cooperative Framework to promote resilient wireless communications and situational awareness during disasters).

\(^{49}\) PR-USVI Stage 2 Order, 34 FCC Rcd at 9173-74, para. 130.

\(^{50}\) 47 CFR § 54.1514(b)(1)-(2) (emphasis added).

\(^{51}\) Petition at 6.

\(^{52}\) Id.

\(^{53}\) Id.
30 days after the end of the third year of support, and all Stage 2 funding recipients must do the same where they use Stage 2 funds for indoor DAS deployments. We make clear that by allowing Stage 2 funds to support indoor DAS, we do not disturb the requirements adopted by the Commission that mobile transmissions—both outdoor and indoor—meet the Commission’s minimum performance requirements for 4G LTE or 5G service, as set forth in the Stage 2 Order, and that mobile support recipients report/certify that their outdoor transmission rates satisfy the standards in section 54.1514(b).

D. No Credit Towards Requirements

16. The PR-USVI Stage 2 Order requires mobile funding recipients to restore 100% of their pre-hurricane coverage by the end of Year 3, which is determined by the providers’ June 2017 FCC Form 477 data. These data represented outdoor coverage, and though the coverage necessarily enveloped buildings, these data did not represent the state of coverage within buildings. Therefore, any DAS deployments would not count toward satisfaction of the carriers’ coverage requirements. Further, we also conclude that T-Mobile may not use Stage 2 funds, including these DAS deployments, toward satisfaction of its Sprint merger obligations.

IV. ORDERING CLAUSES

17. Accordingly, IT IS ORDERED that, pursuant to sections 1-4 and 254 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-154, 254, sections 0.91(b), 0.291, and 1.2 of the Commission’s rules, 47 CFR §§ 0.91(b), 0.291, 1.2, and section 5(e) of the Administrative Procedure Act, 5 U.S.C. § 554(e), this Declaratory Ruling IS ADOPTED.

18. IT IS FURTHER ORDERED that the Declaratory Ruling and the obligations set forth therein ARE EFFECTIVE upon release of this document.

FEDERAL COMMUNICATIONS COMMISSION

Trent Harkrader
Chief
Wireline Competition Bureau

54 See 47 CFR § 54.1514(b); PR-USVI Stage 2 Order, 34 FCC Rcd at 9173, 9173-74, paras. 127, 130-31.
55 47 CFR § 54.1514(b); PR-USVI Stage 2 Order, 34 FCC Rcd at 9171-74, paras. 122, 124, 130-31.
56 47 CFR §§ 54.1509, 54.1510, 54.1513, 54.1514(a).
57 See PR-USVI Stage 2 Order, 34 FCC Rcd at 9164, para. 104 n.367; see also Applications of T-Mobile US, Inc., & Sprint Corp., For Consent to Transfer Control of Licenses & Authorizations, WC Docket No. 18-197, Memorandum Opinion and Order, Declaratory Ruling, and Order of Proposed Modification, 34 FCC Rcd 10578, 10801-28, Appx. G (2019). T-Mobile acknowledges deployments made with Stage 2 funds may not be used toward satisfaction of T-Mobile’s merger commitment. See Letter from Olga de la Torre, Director of Legal Affairs for T-Mobile, Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 18-143 et al., at 1 (filed July 7, 2020).
APPENDIX

PR-USVI Stage 2 Order universal service funds are presumptively appropriate for deploying indoor distributed antenna systems (DAS) to the following public or publicly accessible facilities that aid disaster response:

Categorically Acceptable Facilities for Stage 2 Funds for DAS Deployment
• Hospitals
• Police stations
• Fire stations
• Town halls
• La Oficina Municipal para el Manejo de Emergencias y Administración de Desastres or any municipal equivalent
• Community centers

Specifically Listed or Additionally Acceptable Facilities for Stage 2 Funds for DAS Deployment
Emergency Operation Shelters
• Coliseum Arquelio Torres
• Coliseum Raymond Dalmau

Governmental Buildings
• State Agency for Emergency Management
• Puerto Rico Police Headquarters
• Santa Catalina Palace (La Fortaleza)
• Capitol of Puerto Rico (Palace of Laws)
• Boulevard Plaza Office Center (Humacao)

Municipal / Emergency Hubs
• Caguas Town Hall
• Bayamón Town Hall
• San Juan Town Hall

Hospitals
• Manati Medical
• Mayaguez Medical
• HIMA Hospital San Pablo Fajardo
• HIMA Hospital San Pablo Caguas
• Pavia Hospital Arecibo
• San Lucas Hospital
• Centro Medico Puerto Rico
• Ashford Presbyterian Hospital
• San Jorge Children’s Hospital
• HIMA Hospital San Pablo Cupey
• Metropolitan Hospital
• Doctor’s Center San Juan
• San Francisco Hospital
• Auxilio Mutuo Hospital
• Hospital General Menonita de Aibonito
• Hospital General Castañer
• Hospital San Carlos Borromeo
• Hospital Metropolitano de la Montaña