

**EXAMEN PROFESSIONNEL POUR LE RECRUTEMENT D'INGENIEURS DES TRAVAUX  
GEOGRAPHIQUES ET CARTOGRAPHIQUES DE L'ETAT**

**SESSION 2022**

¤-¤-¤-¤

**EPREUVE DE COMPOSITION FRANCAISE  
SUR UN SUJET D'ORDRE GENERAL**

**DUREE : 3 HEURES**

**AUCUN DOCUMENT N'EST AUTORISE**

- Employer exclusivement de l'ENCRE NOIRE
- Sur la bande d'anonymat détachable de chacun des feuillets : inscrivez votre nom, prénom et signature, ainsi que la date de l'épreuve et le concours
- Ne mettre aucune marque de reconnaissance sur la copie, en dehors de la bande d'anonymat
- Numéroté les feuillets

Canicule, sécheresse, incendies ne cessent de faire la une des médias chaque été. Face à l'urgence, le climatologue Jean Jouzel déclare que dans notre adaptation au réchauffement climatique, « nous devons faire de la nature une alliée » (*Le Monde*, 4 mars 2022)

Comment comprenez-vous cette affirmation ? Pensez-vous qu'il est encore possible d'inverser la tendance ?

Vous répondrez dans un développement argumenté et organisé.

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**SESSION 2022**

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**EPREUVE DE LANGUE  
VERSION D'ANGLAIS**

**DUREE : 1H30**

**AUCUN DOCUMENT N'EST AUTORISE**

- Employer exclusivement de l'encre noire
- Numéroté les feuillets

**CONSIGNE :**

**Traduire le texte, titre inclus**

# Digital mapping reveals network of settlements thrived in pre-Columbian Amazon

**Ruins of monuments, villages, causeways and canals hidden in the dense rainforest are evidence of 'Amazonian urbanism'**



Archaeologists have discovered the ruins of a vast network of settlements hidden beneath the undergrowth of the Bolivian Amazon, in what has been described as the clearest example yet of the complex societies that thrived in a region once held to be pristine wilderness.

[...]

Mysterious mounds were first noted in the region by archaeologists more than 100 years ago.

[...]

Remote sensing had revealed the possible presence of hundreds of settlements. But the difficulties of working in the tropics – and a thick cover of vegetation – obscured the true extent and pattern of the sites.

In 2019, the archaeologist Heiko Prümers and his team began flying over the region by helicopter, mapping the land beneath them with a laser. They were then able to digitally strip away the vegetation, revealing the topography of the ground underneath.



In a paper published in *Nature*, they have now documented a range of settlement sites in detail for the first time – and discovered numerous previously unknown ones.

Within the largest sites, they found monumental platforms and pyramids, some 20 metres (65ft) high. Smaller settlements surrounded the larger ones, linked by causeways running for kilometres. Canals and reservoirs show how the Casarabe shaped the land for agriculture and aquaculture.

The authors describe it as a new form of urbanism in Amazonia.

[...] “This, in my opinion, is the clearest example of low-density urbanism in the Amazonia,” said Michael Heckenberger, an archaeologist [...].

“It is like an index fossil of what full-blown Amazonian urbanism might have looked like,” he added. “They really nailed not what caused these urban societies to appear, not what caused them to collapse – but what they were like at their peak.”

For most of the 20th century, it was held that the Amazon was unsuitable for large permanent settlements. Some still resist the idea of urban societies in the Amazon.

[...]

Umberto Lombardo, another archaeologist [...], said he saw the findings as definitive. “I think that old debate is settled. Now the discussion is the extent to which people changed the Amazon.”

Much of what was assumed to be untouched wilderness might in fact have been shaped by the activities of cultures like the Casarabe.

“Very little of that landscape was not directly influenced, if not constructed or managed, by pre-Columbian societies,” said Heckenberger. “These were not natural forests – they were a mix of the natural features of the tropical environment and cultural patterns of management.”

Thomas Graham,

*The Guardian*, 2 June 2022

