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大学院生命環境科学研究科 2 月期入学試験

(第 2 次学生募集)

地球環境科学専攻

外国語：英語

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注意

- * 指示があるまで問題冊子を開いてはならない。
- * 設問ごとにそれぞれ別の答案用紙を用いること。
- * 設問ごとにそれぞれ 1 枚の答案用紙を用いること。

英文和訳 問題 [1]

次の英文を和訳しなさい

In the last decades, tropical mountain forests have been disappearing at an astounding rate. Deforestation, while a complex phenomenon, is generally driven by population growth, uncertain land tenure, inequitable land distribution and the absence of strong and stable institutions. For example, in Southeast Asia and China, settlers escaping crowded lowland cities typically move "uphill", pushing upland farmers, whose land occupancy is already uncertain, higher into mountain forests. These new settlers, in turn, clear forests and threaten the livelihoods of mountain people. Some forestry and agricultural practices that are unsustainable contribute to deforestation by increasing hillside erosion, threatening mountain biodiversity and impairing the natural processes of forest ecosystems. Indeed, the destabilization of mountain forests creates an ever-escalating spiral of destruction. For example, when too many trees are cut, runoff and soil erosion increase at rates 20 to 40 times faster than soil can be stabilized, impairing water quality in streams and rivers and harming fish and other aquatic species. As more land is degraded, it increases the likelihood of natural hazards, such as avalanches, landslides and floods.

英文和訳 問題 [2]

次の英文を和訳しなさい (図の説明文は訳す必要はない)

These images (Figs. 1 and 2) show the Aral Sea, which is divided between Kazakhstan and Uzbekistan. For more than 30 years, water has been diverted from the Amu-Darya and the Syr-Darya Rivers feeding the Aral, to irrigate millions of acres of land for cotton and rice production in Central Asia. This has caused a loss of more than 60% of the lake's water. The lake has shrunk from over 65,000 km² to less than half that size, exposing large areas of the lake bed. From 1973 to 1987 the Aral dropped from fourth to sixth among the world's largest lakes. The lake's salt concentration increased from 10% to more than 23%, contributing to the devastation of a once thriving fishery. The local climate has reportedly shifted, with hotter, drier summers and colder, longer winters. As the water retreated, salty soil remained on the exposed lake bed. Dust storms have blown up to 75,000 tons of this exposed soil annually, dispersing its salt particles and pesticide residues. This air pollution has caused widespread nutritional and respiratory ailments, and crop yields have been diminished by the added salinity, even in some of the same fields irrigated with the diverted water. (<http://edcwww.cr.usgs.gov/earthshots/slow/Aral/Aral>を一部改変)

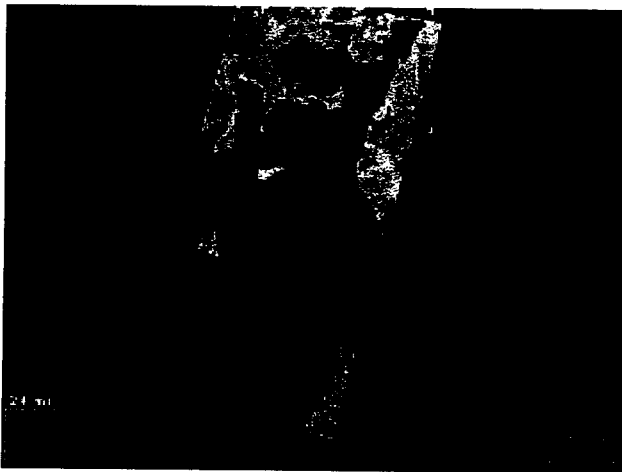


Fig. 1 Landsat image taken on 29 May 1973
(Landsat MSS bands 4, 2, and 1)



Fig. 2 Landsat image taken on 10 Aug.- 22 Sep., 1987
(Landsat MSS bands 4, 2, and 1)

和文英訳 問題 [1]

次の日本語を英文に訳しなさい

発展途上国における都市への人口集中は急激で大規模であり、多くの都市環境問題を引き起こしている。交通、上・下水道、廃棄物処理などの能力が人口の増大に追いつかず、さまざまな環境汚染が発生している。流入人口の多くは不法占拠者となってスラムを形成し、劣悪な生活環境のもとで生活せざるを得ない。農村から都市への人口流入の背景には農村の貧困がある。人口増加、農地の荒廃、技術・資金不足による農業生産力の低さが、都市と農村の間に大きな収入格差や就業機会の格差を生みだしている。

和文英訳 問題 [2]

次の日本語を英文に訳しなさい。

大気中で水蒸気を運ぶ営力は、太陽のエネルギーである。地表に届いた太陽エネルギーは、かなりの部分が水の蒸発に使われると考えて良い。こうして水蒸気の中に取り込まれるエネルギーを、潜熱という。残りの太陽エネルギーは地表が吸収し、吸収の効率は高緯度ほど低い。太陽光は、赤道付近であればほぼ直角に差し込むが、緯度とともに角度は小さくなり、春分と秋分の両極ではゼロである。そのため、赤道から遠いほど、同じエネルギーを受ける面積が大きくなる。

潜熱：latent heat

春分・秋分：equinox