

It is likely that universal human needs do exist across cultures, but the idea that Maslow's theory can be generally applied is a precarious assumption.² Furthermore, assuming individuals who do not have all their basic needs met (perhaps those living in poverty) are incapable of achieving belongingness, self-worth or self-fulfilment is unsound.

Perhaps the most important consideration is that there is no empirical evidence to support the hierarchy of needs theory.³ For instance, Maslow conceptualised self-actualisation by studying the biographies of a small and narrow group of individuals (highly educated white men), thus a subjective assessment of a personally selected homogenous sample. The theory is also difficult to test for a number of reasons, including the lack of clear definitions of needs and the difficulty in proving causal relationships.

It is undoubtedly helpful for veterinary professionals to adopt a healthier approach to breathing, eating, drinking and sleeping, but we must remember that Maslow's 80-year-old theory lacks an evidence base and that many of us are lucky to possess the resources to meet those universal human needs.

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References

- 1 Maslow AH. A theory of human motivation. *Psychol Rev* 1943;50:370–96
- 2 Tay L, Diener E. Needs and subjective wellbeing around the world. *J Personal Soc Psychol* 2011;101:354–6
- 3 Wahba MA, Bridwell LG. Maslow reconsidered: a review of research on the need hierarchy theory. *Org Behav Hum Perf* 1976;15:212–40

ANIMAL WELFARE

Impact of naval sonar systems on sealife mortality

WE understand that military naval exercises by France, Norway and the USA are to take place, or have already taken place, in Norwegian waters



and the Mediterranean Sea. The use of military sonar is expected in the context of these navy operations.

A clear-cut relationship between exposure to high-intensity, mid-frequency waves released by military antisubmarine sonars and mass strandings and deaths of beaked whales (*Ziphiidae*) was demonstrated 20 years ago in the Canary Islands. In fact, following exposure to the stimuli from the sonar systems, the whales inhabiting those waters were shown to develop 'gas and fat embolic syndrome', a pathological condition resembling 'decompression sickness' in divers.^{1,2}

Following a sonar ban in 2004, no more mass strandings of beaked whales have occurred in the Canary Islands during the past 20 years,³ which means life and peace for these iconic and increasingly threatened sea creatures.

As such, we feel the need to express our most serious concern about the deleterious effects of military sonar devices on cetacean species and populations living in the geographical areas where naval operations will be carried out.

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- 1 Jepson P, Arbelo M, Deaville R, et al. Gas-bubble lesions in stranded cetaceans. *Nature* 2003;425:575–6
- 2 Fernández A, Edwards JF, Rodríguez F, et al. 'Gas and fat embolic syndrome' involving a mass stranding of beaked whales (family Ziphiidae) exposed to anthropogenic sonar signals. *Vet Pathol* 2005;42:446–57
- 3 Fernández A, Arbelo M, Martín V. No mass strandings since sonar ban. *Nature* 2013;497:317

DEATH NOTICES

Campbell On 8 March 2022, Allan Campbell, BVMS, DVSM, MRCVS, of Edinburgh. Mr Campbell qualified from Glasgow in 1954.

Downie On 22 December 2019, James Grant Downie, BVM&S, BSc, PhD, MRCVS, of Auldearn, Nairn. Dr Downie qualified from Edinburgh in 1960.

Holmes On 29 July 2021, Ian Peter Holmes, BVSc, MRCVS, of Manukau City, New Zealand. Mr Holmes qualified from Massey in 1985.

Reidy On 23 March 2022, John Conor Reidy, MVB, MRCVS, of Slane, County Meath, Ireland. Mr Reidy qualified from NUI in 1967.

Stirling On 15 November 2021, Lindsay Robertson Stirling, MRCVS, of Whitney, Oxfordshire. Mr Stirling qualified from Edinburgh in 1949.

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