

Chinese scientists plead for research before more 'mountain moving'

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Yellow Mountain in China. Credit: chinafacttours

(Phys.org) —A trio of researchers from Chang'an University in China has published a Comment piece in the journal *Nature*, pleading for planners in China to consider more carefully the repercussions of cutting the tops off mountains to fill valleys to allow cities to grow larger.

Cutting off [mountain tops](#) is not unique to China, coal miners have been doing just that for many years in the eastern part of the United States. What is new is using mountaintop material to fill in [valleys](#) near cities to

allow for continued growth. The problem with the idea, Peiyue Li, Hui Qian and Jianhua Wu write, is that it likely won't work in many instances and will cause a whole host of [environmental problems](#).

Mountains and valleys exist in the states they are in for a reason—geological events, time and weather have all played a hand, resulting, in most cases, in a reasonably stable environment. Cutting off mountaintops and especially filling in valleys changes the way rainfall runoff makes its way to rivers, streams or even the ocean. Plus, the trio point out, the material from the mountaintops (thick windblown silt) likely will take at least a decade to settle enough to erect buildings. The problem, they note, is the lack of research being undertaken to learn what might happen to cities and the neighboring environment if such practices continue. Building on such soft material could result in sinkholes, swift terrain deterioration and mudslides.

One example of a lack of planning, the team points out, is the increase in dust released into the air as earth movers haul mountain dirt to valleys—they kick up massive amounts of dust that merges with other pollutants causing even bigger problems for people in the area. They note that prior research has shown that land modification projects in other parts of the world (and in China) have led to landslides, flooding, rivers changing course and increased pollution.

Of extreme concern is the scale at which such mountain topping is occurring—700 projects are currently underway, none of which have been thought through, the researchers say, and the result is very likely to be something catastrophic in the near future. They suggest several changes be made: soil in sites used by earth movers should be watered to prevent dust kicking up, trees and plants should be planted on areas left barren, farmers should be compensated for lost land and finally, economists and environmentalists should be consulted before such projects are approved.

More information: Comment: Environment: Accelerate research on land creation: [www.nature.com/news/environment ... and-creation-1.15327](http://www.nature.com/news/environment-...-and-creation-1.15327)

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