SUMMARYFILE

You need more land? This is an increasingly relevant issue in today's world.

Below there is illustrative map of Singapore with red areas indicating current (in pink) and future (in red) land reclamation projects.

Source: https://blog.nus.edu.sg/reddotpollution/2022/02/21/not-enough-land-make-more/

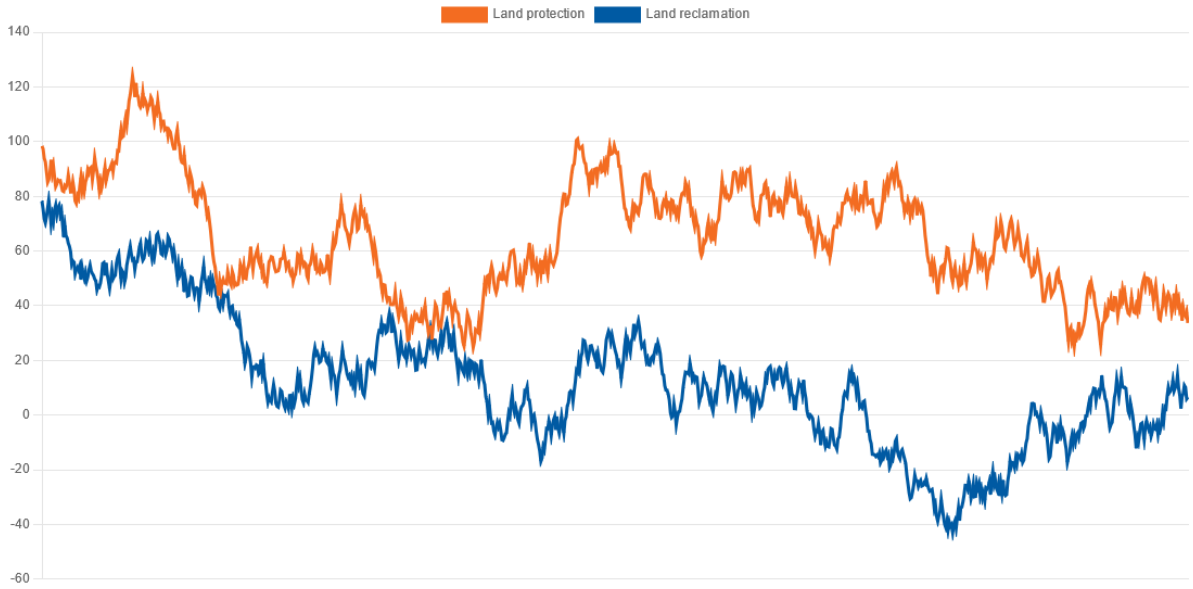
One option is to get it from the sea, called "land reclamation".

In table below there are presented some countries which have been successful in reclaiming land, sometimes essential proportion of their previous territories. The full list of the countries having successfully reclaimed a land is much longer, the examples below serve as illustration.

Country	sq km reclaimed	% of territory reclaimed
Netherlands	7000	17
Monaco	0.41	20
South Korea	1550	38
Singapore	135	20
Macao	17	170
Bahrein	313	76

Source: https://en.wikipedia.org/wiki/Land_reclamation

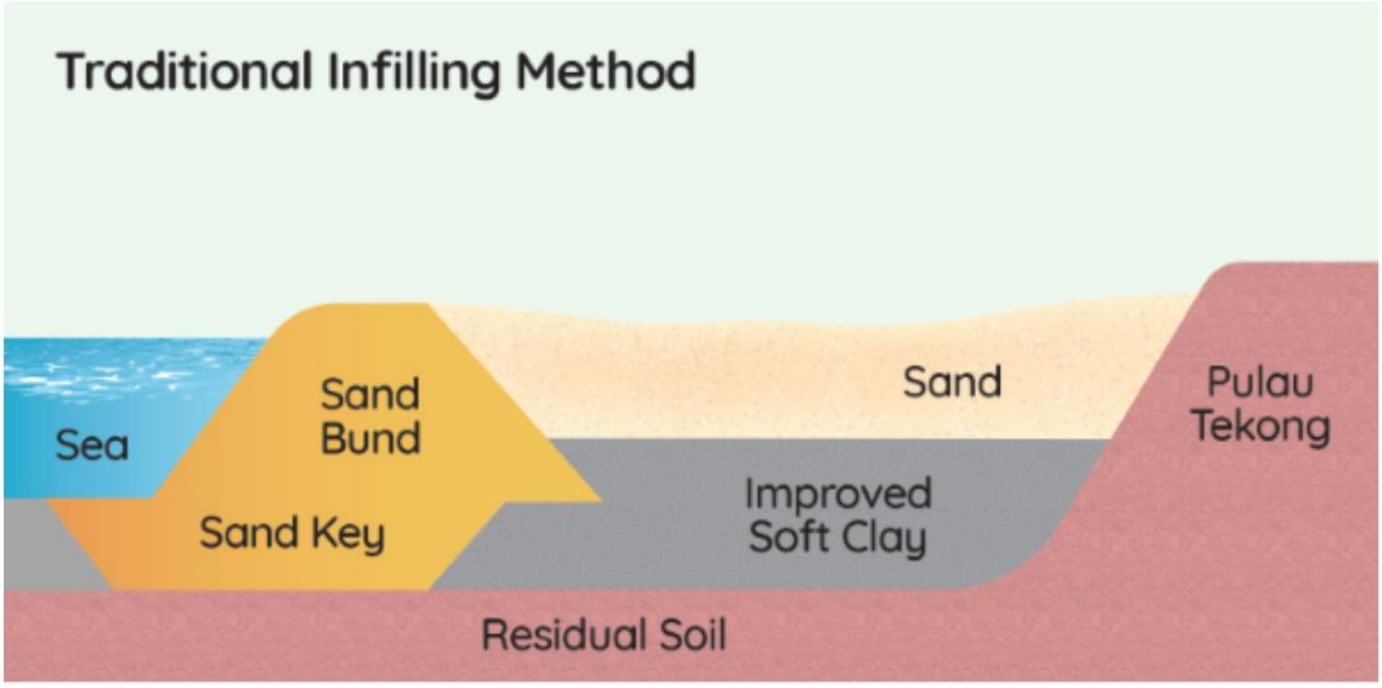
Two processes are run in parallel fashion (a) land reclamation and (b) land protection, as shown below:

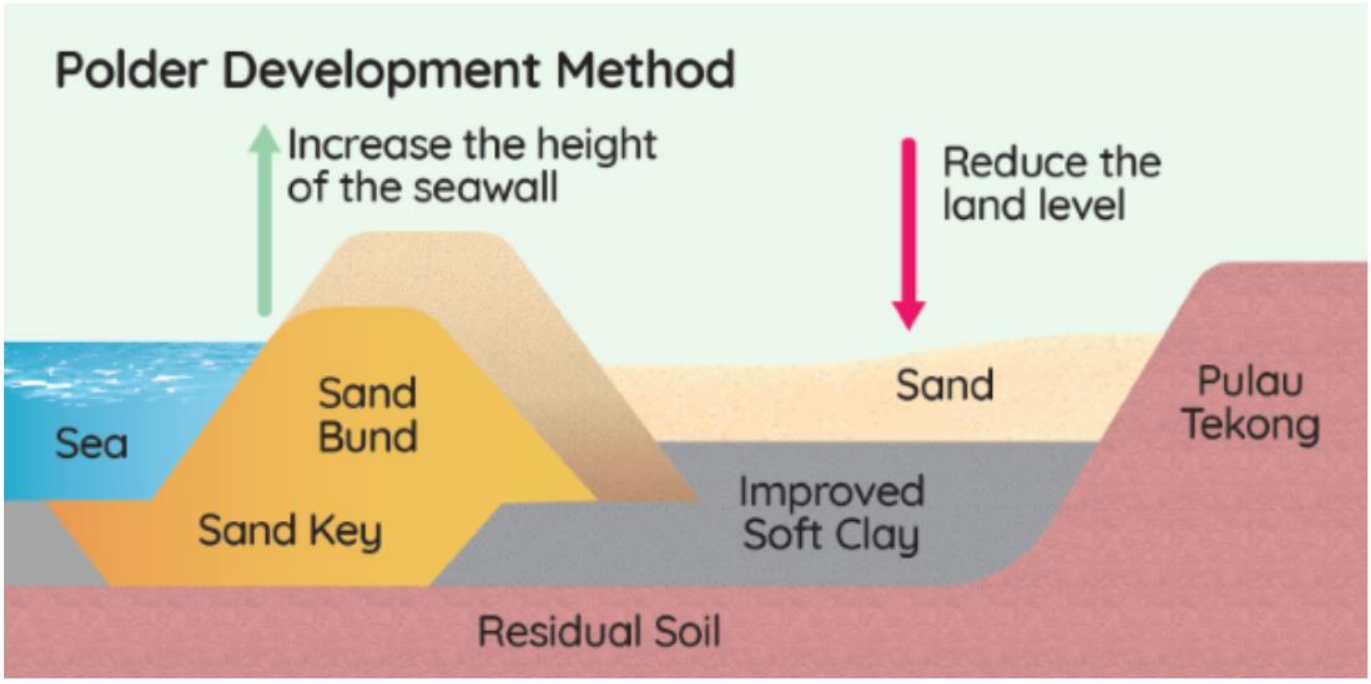


Technical chart, not containing real information.

Several methods available to reclaim land.

When it comes to land reclamantion then there are several ways to get this done, some of those methods are more traditional, some are more advanced. Every unique situation could be solved in the way most suitable to specific case.

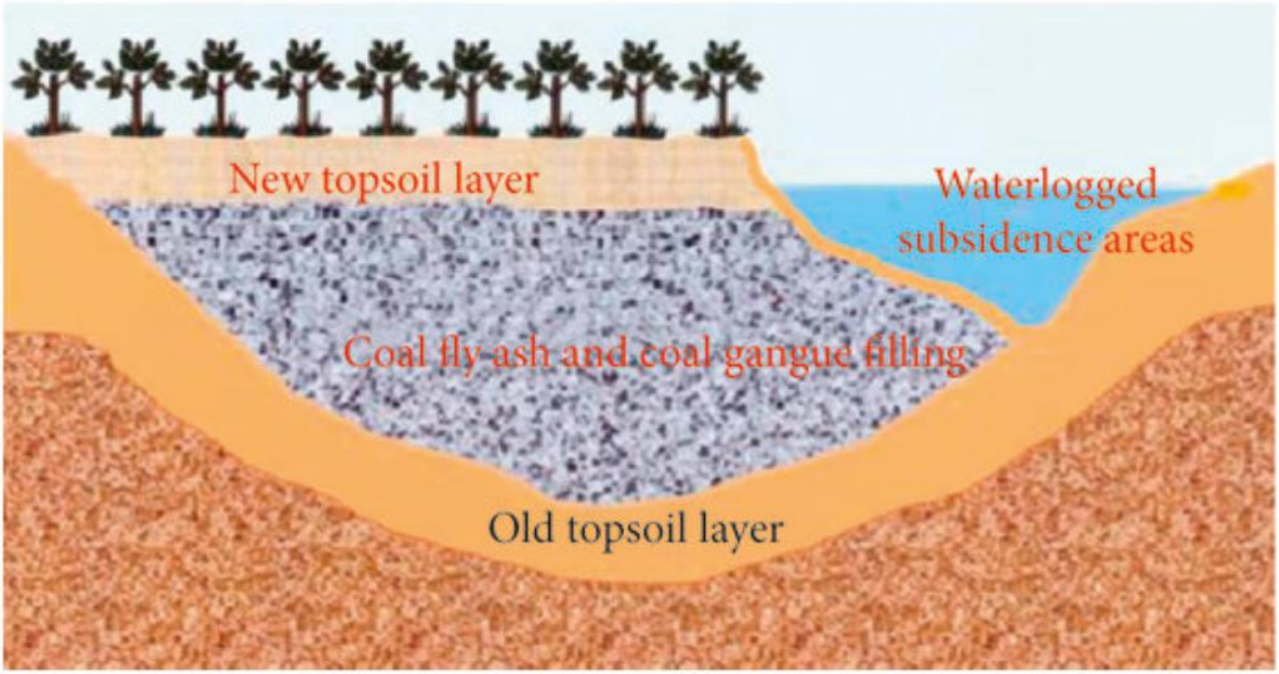




Source: https://blog.nus.edu.sg/reddotpollution/2022/02/21/not-enough-land-make-more/

Or yet another solution.

There are several scientific analyses available to describe the opportunities for land reclamation.



Source: https://www.researchgate.net/figure/Diagram-of-filling-the-reclamation-area-of-mining-subsidence-land_fig2_360562327

Land reclamation and land protection need to be in respective balance.

In table below there are presented some hypothetic combinations where imaginary countries have claimed the land and also applied measures to protect it. However the proportion protected is not always in optimal proportion to land reclaimed.

Country	sqkm reclaimed	sqkm protected	% protected	Stability status
Country 1	400	20	5%	Low
Country 2	300	300	100%	Excellent
Country 3	860	100	12%	Low
Country 4	1200	1100	92%	High
Country 5	700	0	0%	Dangerous
Country 6	720	360	50%	Average
Country 7	750	600	80%	High
Country 8	250	100	40%	Average
Country 9	850	600	71%	PotentiallyWorsening
Country 10	660	600	91%	High
Average	6690	3780	57%	Average

Note: Table above does not take into the considration the cases where country has natural (not reclaimed) land which needs to be protected against water. The protection is considered only in respect to this land which is reclaimed from the sea (meaning the rest of the possible protection, not relevant to reclaimed land, is not taken into account).

Suitable infotechnology needs to be applied.

Below there is preliminary schematic representation how system could be designed - preliminay and needs to be further sophisticated.