

Abstract of thesis presented to the Senate of Universiti Malaysia Terengganu in fulfillment of the requirements for the degree of Doctor of Philosophy

**PLACES, PLANTS AND PEOPLE IN THE
STATE OF TERENGGANU, MALAYSIA: AN
ASSESSMENT FROM TWO ERAS**

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Places, plants and people exist in dynamic circumstances where they change according to time. Whether these elements change or remain the same could indicate the strength or the weakness of the local socio-culture. Changes in people's relationship with the plant environment, cultural characteristics in the landscape and the built environment are among the parameters that could be measured to evaluate the changes in the local environment and socio-culture. This study was conducted to evaluate the changes in the relationship between people and the plant environment, and the disappearance of cultural identity in the landscape and built environment in Terengganu, Malaysia. Comparisons were made during four decades between 1982 and 2022. This study involved the documentation of the flora, cultural landscape and built environment between 1982 and 2007 (past era) and the assessment of changes that have occurred to the same places from 2013 until 2022 (present era). Information was documented using field observation and interview methods, while the assessment of change was carried

out by comparing with an inventory of plants, as well as photos and sketched descriptions of landscapes and the built environment that were recorded during the two timeframes. After comparing the baseline inventory of 322 plants that were identified in the past era with the data collected from the present era, the traditional medicinal plants category recorded a decline from 64% to 54%. This may signal a loss of medicinal plant knowledge particularly due to the demise of knowledgeable practitioners. In terms of the plants' current occurrence (present, unknown or absent) at the three different types of study sites (coastal, village or hillside), no significant difference was found ($\chi^2 (14, N = 322) = 15, p = 0.189$) probably because the listed species are the most reputed or common in each landscape. This result coincides with the observed physical changes in landscape profiles at all study sites. Meanwhile, a 41% decline in cultural features sightings was recorded in the present era, particularly for water and daily activities, as corroborated by inventories and pictorial evidence. Overall, this study suggests that over time, change in the relationship between places, plants and people in Terengganu has occurred. This may lead to a conclusion of a decreased connection of the people with their local environment. However, resilience was discovered in some floral and cultural characteristics of the state that could be used as a reference for future decisions towards a development that would offer, not only historical memories, but an understanding, and potentially a re-use, of Terengganu's floral and cultural resources from the past.

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**TEMPAT, TUMBUHAN DAN MASYARAKAT
DI TERENGGANU, MALAYSIA: PENILAIAN
BERDASARKAN DUA ERA**

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Tempat, tumbuhan dan manusia bersifat dinamik di mana semuanya berubah mengikut peredaran masa. Berubah atau kekalnya elemen ini mungkin boleh memberi gambaran kekuatan atau kelemahan sosiobudaya setempat. Perubahan dalam hubungan masyarakat dengan persekitaran flora dan kehilangan ciri-ciri identiti dalam landskap dan binaan adalah antara parameter yang boleh diukur untuk menilai perubahan sekitar dan sosiobudaya setempat. Kajian ini dijalankan untuk menilai perubahan dalam hubungan manusia dengan persekitaran flora dan perubahan identiti budaya dalam landskap dan alam bina di Terengganu, Malaysia. Perbandingan dibuat dalam julat masa empat dekad antara tahun 1982 hingga 2022. Kajian ini melibatkan dokumentasi flora, lanskap budaya dan alam bina antara tahun 1980 hingga 2007 (era yang lalu) dan menilai perubahan yang berlaku pada kawasan yang sama pada tahun 2013 hingga 2022 (era terkini). Pendokumentasian maklumat adalah menggunakan kaedah tinjauan lapangan dan temu ramah, manakala penilaian perubahan dibuat

dengan membandingkan inventori tumbuhan, foto-foto serta lakaran lanskap dan alam bina yang dirakam pada dua julat masa tersebut. Perbandingan inventori 322 tumbuhan yang telah dikenalpasti pada era yang lalu dengan penelitian pada era terkini menunjukkan penurunan daripada 64% kepada 54% dalam kategori tumbuhan ubatan tradisional. Ini mungkin menyebabkan kehilangan ilmu tumbuhan ubatan terutamanya disebabkan oleh kehilangan pengamal yang arif. Dari segi kewujudan tumbuhan (ada, tidak pasti, tiada) di ketiga-tiga kategori tapak kajian (pesisir pantai, kampung dan bukit), didapati tiada perbezaan yang ketara ($X^2 (14, N = 322) = 15, p = 0.189$). Dapatan ini bertepatan dengan pemerhatian perubahan fizikal pada profil lanskap di setiap tapak kajian di mana spesis pokok yang dicatatkan adalah jenis terkenal dan terdedah. Sementara itu, terdapat 41% penurunan pemerhatian ciri-ciri budaya pada era terkini terutamanya untuk ciri-ciri air dan aktiviti harian, seperti yang disokong oleh inventori dan bukti bergambar. Secara keseluruhannya, kajian ini mencadangkan bahawa perubahan berterusan di antara tempat, tumbuhan dan manusia di Terengganu telah berlaku. Ini boleh membawa kepada kehakisan pertalian penduduk dengan persekitaran setempat mereka. Namun demikian, terdapat daya tahan bagi ciri budaya dan flora negeri ini yang boleh digunakan sebagai rujukan dalam membuat keputusan berkaitan pembangunan yang menawarkan bukan sahaja kenangan sejarah malah kefahaman tentang penggunaan semula sumber budaya dan alam dahulukala di Terengganu.