# *WHO Global Atlas*

## of Traditional, Complementary and Alternative Medicine

## MAP VOLUME

C.K. Ong | G. Bodeker | C. Grundy | G. Burford | K. Shein

World Health Organization

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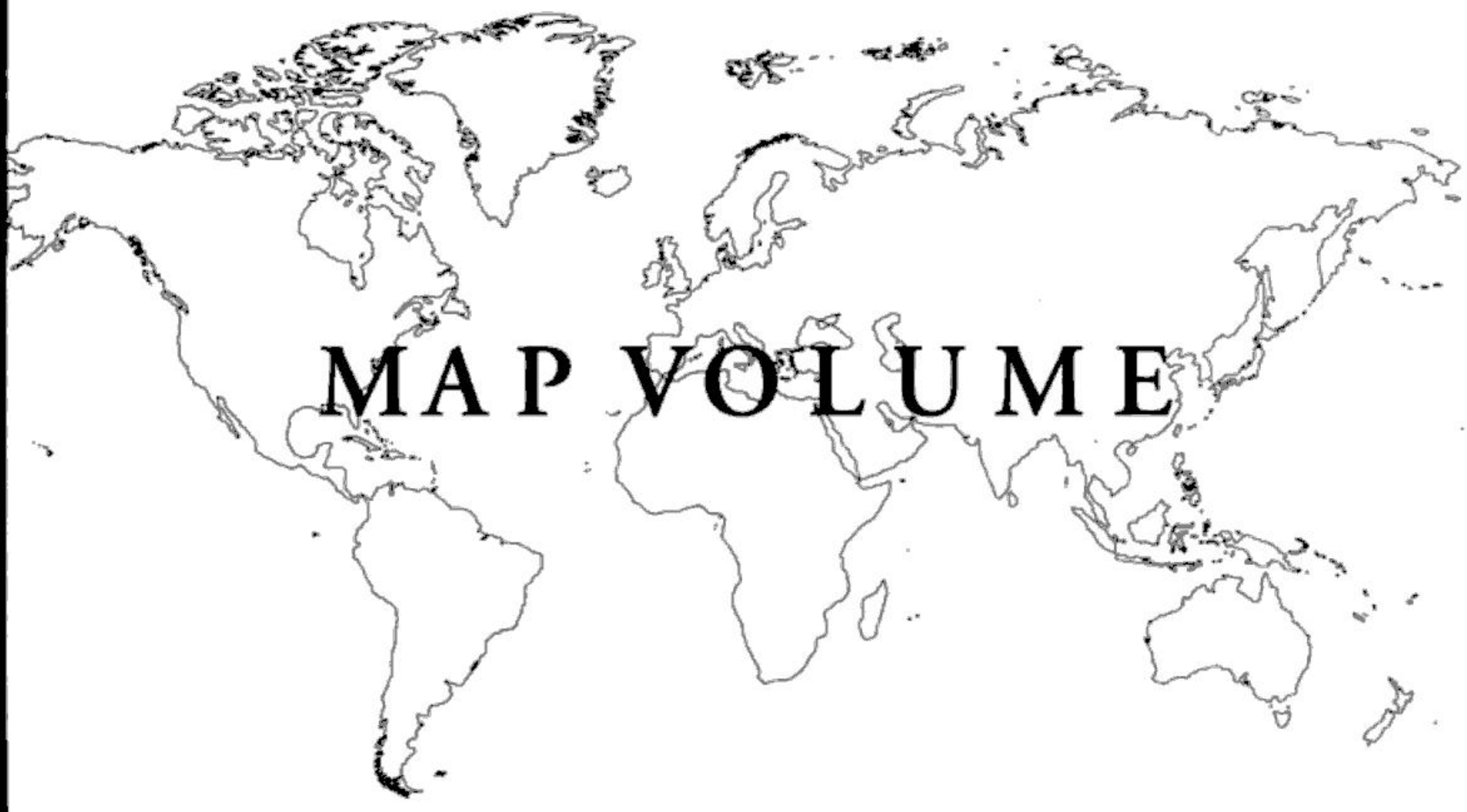
# WHO GLOBAL ATLAS

## OF TRADITIONAL, COMPLEMENTARY AND ALTERNATIVE MEDICINE

C.K. Ong | G. Bodeker | C. Grundy | G. Burford | K. Shein



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# FOREWORD

The International Conference on Primary Health Care, held in 1978 in Alma-Ata in the former Soviet Union, launched "Health for All", a global movement that has shaped the dynamics of public health ever since. Yet, despite indisputable advances made, the situation remains as "health for some". Issues such as disparity in health-care coverage; lack of equitable, accessible and affordable health care for all; and problems with availability of realistic financial resources for health services and medicines are daily realities for the indigent, the marginalized and the underprivileged.

The World Health Organization (WHO) estimates that one-third of the world's population has no regular access to essential modern medicines: in some parts of Africa, Asia, and Latin America, as much as half of the population faces these persistent shortages. However, in these same situations, the rich resources of traditional remedies and practitioners are available and accessible.

Traditional medicines play a primary role in people's health, as they have for thousands of years. The range of therapies and practices is wide, varying greatly from country to country and from region to region. The most well-known are the Ayurveda of India and traditional Chinese medicine and these systems of medicine have now spread to other countries.

The use of herbal medicines, and complementary and alternative medicine, is increasing in industrialized countries, in connection with disease prevention and the maintenance of health. There is an emphasis on self-empowerment and a more holistic approach, in which life is understood as being a union of body, senses, mind and soul; and health as being the combination of physical, mental, social and spiritual well-being. This approach is consistent with WHO's definition of health. The practices of traditional, complementary and alternative medicine focus on the holistic approach and include medicinal plants. Herbal medicines are perceived as "safe", although in reality there are potential risks, such as side-effects, in the use of all medicines. The relatively low cost of traditional remedies and their greater accessibility contrasts with the rising cost and limited availability of a number of even the most essential modern medicines.

The WHO Global Atlas of Traditional, Complementary and Alternative Medicine relates well to one of WHO's overall strategic directions in traditional medicine for 2002–2005; that of tackling excess mortality and morbidity especially among poor and marginalized populations. Traditional medicine's accessibility and affordability are key values for populations struggling against communicable and noncommunicable diseases, especially in their chronic forms.

We have seen a global resurgence of interest in the use of traditional, complementary and alternative medicine over the last decade. The Fifty-sixth World Health Assembly formally acknowledged this in May 2003; Member States discussed the WHO Traditional Medicine Strategy 2002–2005 and adopted resolution WHA56.31. These documents set out squarely the major challenges: the lack of organized networks of traditional practitioners; the lack of sound evidence of the safety, efficacy and quality of traditional medicines; the need for measures to ensure proper use of traditional medicines and to protect and preserve traditional and natural resources necessary for their sustainable application; and measures for training and licensing of traditional practitioners.

The Traditional Medicine Strategy reflects both the value placed on traditional medicine as a resource, and the challenges ahead. It details four directions for our work with countries in this field: in the areas of policy (where we aim to broaden recognition of traditional medicine, supporting its integration into national health systems as appropriate, and protecting indigenous knowledge); safety, efficacy and quality (where our work is to expand the knowledge base on traditional medicine and raise its credibility); access (where we must work to increase availability and affordability, especially for poor populations); and rational use (where the task is to ensure appropriate and sustainable use of these medicines by consumers and providers, preserving and protecting medicinal plant resources and knowledge of traditional medicine).

Mapping the issues through this Atlas gives them fresh impact, illustrating graphically the "gaps", and therefore the needs. In this way it directly supports the implementation of WHO's strategic plans. For example, a map that shows only 25 countries as having a national policy for traditional

The Atlas is an advocacy tool to show the global community where our efforts are most required and to stimulate joint responsibility for solving the problems. It is also part of the solution. The actual process of its compilation has, in itself, been a useful means of raising the profile of traditional medicine globally. In asking the questions and articulating the issues, constructive progress has already been made in underlining the importance of traditional medicine in the field of public health and highlighting to all Member States where work still needs to be done.

The Atlas provides reliable, evidence-based information on the use and practice of traditional medicine in the world today, to stimulate decision-making in health sector development and reform. It provides a reference and research tool for all those who are working to increase availability and accessibility to cost-effective remedies and methods of treatment; and to promote proper use and to improve training and education of providers of traditional medicines, and complementary and alternative therapies. I believe that the success of these efforts will eventually lead to a more comprehensive health-care delivery which will, in turn, bring us closer to realizing "Health for All" in the 21st century.

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# PREFACE

Traditional medicine (TM) has always maintained its popularity worldwide. In addition, for more than a decade, there has been an increasing use of complementary and alternative medicine (CAM) in many developed and developing countries. In line with increased international demand, the safety, efficacy and quality of the products and practices used in TM/CAM have become important concerns for both health authorities and the public. Therefore, WHO Member States are seeking to establish policy frameworks and deciding in what ways these products and practices should be regulated to ensure their safety, efficacy and quality. In this context, it would be beneficial for Member States to share experiences in order to assist each other as they begin to develop their own policies and regulations. The compilation of the WHO Global Atlas of Traditional, Complementary and Alternative Medicine has provided a mechanism for sharing evidence-based information on the current state of TM/CAM.

## Background to the Data Collection and Working Process

The Global Atlas was designed to record and map the current status of TM/CAM around the world, in terms of policy, regulation, education, research, practices and use. To this end WHO through its Centre for Health Development (WHO Kobe Centre) organized two meetings, in September 2001 and in June 2003. All together, 73 participants, including national health authorities, experts, and representatives of NGOs, from 45 countries in the six WHO regions, engaged in an international collaborative effort to prepare the Global Atlas.

The meeting in 2001 reviewed and discussed the primary data available on the prevalence and utilization of TM/CAM, as well as the development of a working procedure to compile national information and data for the Atlas. Since TM/CAM is not been legally recognized in many countries and there is a lack of data for most countries, the participants decided that the Global Atlas would be based on data from secondary sources. Due to the lack of an effective and generally-accepted tool for the purposes of secondary data collection, three types of indicator were proposed; background, structural (including a survey quality assessment indicator), and process indicators (see Annexes). These indicators were employed to gather the demographic information, infrastructural development of TM/CAM at the national level, and its utilization and popularity.

Before launching the global data collection of information, the feasibility of using the indicators was field-tested in Indonesia, Panama, Thailand, and Viet Nam in cooperation with national authorities relating to TM. In order to gather these data, the WHO Kobe Centre together with the Traditional Medicine Team at WHO Headquarters and the six WHO regional offices set up a working group in each region. The WHO European Region coordinators working at Global Initiative for Traditional Systems (GIFTS) of Health at Oxford University, United Kingdom, were commissioned by the WHO Kobe Centre to collate the information received from the six regional working groups. Each working group contacted national focal points and/or working partners in the countries of their respective region to collect information and data. After global data collection, analysis and collation by the regional working groups had been completed, a meeting was convened in June 2003, at which it was agreed that the Global Atlas would consist of a map volume and a text volume. After the meeting, the WHO Kobe Centre sent the final draft of each country chapter to the respective national health authorities for their review and comments.

## Utilization of the Global Atlas

The Global Atlas facilitates an easy review of many aspects of the situation regarding the use of TM/CAM in different countries, which therapies are most popular worldwide, how many countries have already established policy and regulation of TM/CAM, etc. It provides a rich source of information to assist Member States seeking to develop their national policies on TM/CAM. However, it should be noted that the Global Atlas was prepared on the basis of information and data from secondary sources and references are included at the appropriate points.



One of the four objectives of the WHO Traditional Medicines Strategy 2002–2005 is to assist

veloping and implementing national TM/CAM policies and programmes. From the information gathered in an ongoing WHO global survey of national policy and regulation of TM/CAM and herbal medicines, it is clear that the situation is evolving rapidly and that many countries are currently engaged in establishing national policies and regulations.

Thus, in order to capture this changing scenario, the Global Atlas will need to be updated regularly. Meanwhile, it provides an excellent overview of the situation of TM/CAM in the world today.

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# INTRODUCTION

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It is now well established that interest in traditional, complementary and alternative medicine (TCAM) is rising rapidly throughout the world. Policy-makers, consumers and professional organizations have been calling for greater evidence of efficacy and safety, integration of TCAM and modern (allopathic) medical services, public sector support for TCAM services and comprehensive national policies for what has been, until recently, a consumer-led interest in most countries. Some countries, notably China, India and a number of others in Asia have been working actively to build the TCAM sector for the combined reasons of tradition and cost–effectiveness. In addition, awareness of the significant export potential of herbal medicines in a burgeoning global marketplace has accelerated the drive for increased levels of production and quality control.

In the context of this changing health-care environment it became apparent that there is the need for a comprehensive policy overview of TCAM and for countries to share information about their experiences with policy, legislation, regulation, research development, financing, training and professional development, quality control and safety regulation.

In response to this need and international momentum, the *WHO Traditional Medicine Strategy 2002–2005* (*1*) was formulated. It identifies four broad areas for action if the potential of TCAM to play a role in public health is to be maximized. These areas are: policy; safety, efficacy and quality; access; and rational use.

While consumer demand is rising and policy-makers are beginning to respond with moves to formalize TCAM within national policy, it is widely recognized that the indigenous sources of medical knowledge, handed down from generation to generation, are disappearing, especially within the oral traditions of the world. In these traditions, health knowledge extends to an appreciation of both the material and non-material properties of plants, animals and minerals. Their classificatory systems range in scope from the cosmological to the particular in addressing the physiological make-up of the individual and the specific categories of materia medica needed to enhance health and well-being. Mental, social, emotional, spiritual, physical and ecological factors are all taken into account. In establishing policy, it is important that these fundamental theoretical underpinnings of traditional health systems are respected and perpetuated in order to ensure their continuity and benefit in an intact form.

The WHO Centre for Health Development (WHO Kobe Centre; WKC), Kobe, Japan, has been addressing the issues associated with traditional medicine since 1999 and has, in a series of international meetings and publications, promoted the generation of information concerning priority research areas and development of the sector (*2, 3*). One of these meetings (*3*) resulted in the generation of a standardized set of indicators (Annex 1) which were identified as central to the development of a global overview that could be presented as an atlas of TCAM.

In 2000, WKC and the Global Initiative for Traditional Systems (GIFTS) of Health at Oxford University, United Kingdom, participated in the WHO International Symposium (*4*) which led to the collection of information for the Global Atlas. In partnership with working groups set up by the WKC and the WHO regional offices, GIFTS of Health worked with the Geographical Information Systems Unit of the London School of Hygiene and Tropical Medicine, United Kingdom, in the

Maps are essentially the product of aggregating large amounts of quite detailed information, but it was also recognized that a level of detail should be preserved in developing this Global Atlas. Thus two volumes have been produced. The text volume includes six regional overviews and national reports from three or four countries in each WHO region. The map volume provides a visual representation of the distribution of policy developments in a range of areas globally, across regions and within countries. Predictably, the maps reflect the level of detail of the information that was available for their construction.

During the data collection exercise it became apparent that there are fewer data available on TCAM than desired, thus making the mapping more approximate than would be ideal. The exercise also highlighted the need for regular national, regional and international surveys of TCAM utilization trends, safety reporting, economic studies of TCAM, and policy analyses of different regulatory strategies and their impact on service delivery and consumer satisfaction. Furthermore, the development of the Global Atlas has underscored the need for clinical and experimental research, large-scale policy-related research, utilization studies and public health outcomes research in relation to TCAM.

As a result of the compilation of data in the Global Atlas it is clear that there is a wide spectrum of policy development across WHO regions and among countries within regions. Interestingly, there is a global trend away from the sector being led by consumers and advocacy groups of practitioners and towards a situation where governments in most countries are working to establish a full regulatory context for the practice and use of TCAM. At one end of the spectrum, there are countries which formally promote and finance TCAM development while, at the other end, there are countries where this has not yet begun. In between, there is a large volume of emerging policy and investment, with varying degrees of autonomy of TCAM professions. However, little is known, other than in a very few industrialized countries, of the full extent of TCAM use by the public, particularly the differing patterns of use according to disease, income, gender, geography and culture. Significant national and international investment into this type of research and in health-systems research will be needed to ensure that subsequent editions of the Global Atlas are able to provide greater levels of detail for mapping trends, identifying the outcomes of various policy models, and providing a detailed framework to assist countries with the further development of their TCAM sector.

However, the process has begun and there is now a global bird's eye view of the status of TCAM. It is hoped that the two volumes of the Global Atlas will contribute to the evolution of the sector and its response to the global demand for pluralism in health care.

## References

1. *WHO Traditional Medicine Strategy 2002–2005.* Geneva, World Health Organization, 2002 (WHO/EDM/TRM/2002.1).
2. *Traditional medicine: better science, policy and services for health development. Proceedings of a WHO International Symposium, Awaji Island, Hyogo Prefecture, Japan, 11–13 September 2000.* Kobe, WHO Centre for Health Development, World Health Organization, 2001.
3. *Global Information on Traditional Medicine/Complementary and Alternative Medicine Practices and Utilization. Proceedings of an International Consultative Meeting, Kobe, Japan, 19–21 September 2001.* Kobe, WHO Centre for Health Development, World Health Organization, 2001.
4. Bodeker G. Planning for cost-effective traditional health services. In: *Traditional medicine: better science, policy and services for health development. Proceedings of a WHO International Symposium, Awaji Island, Hyogo Prefecture, Japan, 11–13 September 2000.* Kobe, WHO Centre for Health Development, World Health Organization, 2001:31–70.

# MATERIALS AND METHODS

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## Introduction

The standardized core indicators selected during the International Consultative Meeting, "Global Information on Traditional Medicine/Complementary and Alternative Medicine" (*1*) provided the basic framework for the atlas data collection exercise. Three groups of indicators were established for background, structural and process variables for all countries and regions. The background indicators cover aspects of the basic demography of a nation or region. The structural indicators examine the legislative, policy, regulatory, financing and research infrastructure of a nation or region. The process indicators aim to elucidate the trends and patterns of use of traditional, complementary and alternative medicine (TCAM) in each country and region. The process indicators also examine health economics, sociodemographic factors and rationale for choice with respect to TCAM.

## Testing and Deployment of the Data Collection Instrument

A questionnaire (Annex 1) was developed based on the indicators established (*1*), field tested in four countries (Indonesia, Panama, Thailand, and Viet Nam) and then deployed to collect information from the Member States in the six WHO regions. Regional coordinators were responsible for collating the completed questionnaires and producing an interim report for their region. Based on the results of this exercise and the outcome of a review meeting in June 2003, a short form was developed (Annex 3) and regional coordinators were asked to use this to submit final datasets for the purposes of mapping. The WHO European Region coordinators at the GIFTS for Health at the University of Oxford were appointed as global coordinators for this project.

## Search Strategy

To amplify data for some regions (African, Eastern Mediterranean and European Regions), a systematic bibliographic search and Internet search strategy was used. The Internet was used to search for contacts, organizations and education centres involved with TCAM. Keywords such as 'complementary therapies, complementary medicine, alternative therapies, alternative medicine, traditional medicine', and the names of individual therapies, were submitted to a number of broad-based search engines which included www.google.com, www.alltheweb.com, and www.metacrawler.com. In the Internet search using www.google.com, all official health websites relating to a WHO region (e.g. Ministry of Health websites) were identified and scanned for information on TCAM (with the aid of internal search engines in the sites where available). Similar searches were then carried out for each country, using (in turn) the names of the individual therapies as well as the search terms 'traditional medicine', 'traditional healers', 'indigenous medicine', 'indigenous healers', 'folk medicine' and 'folk healers'. Other terms such as 'Ayurveda', 'Unani' and 'Islamic medicine' were also used for some countries.

In the bibliographic search, two separate search engines were used: MEDLINE (search terms 'traditional medicine', 'alternative medicine' and 'herbal medicine') and the Anthropological Index Online (search terms 'medicine' and 'health'). Abstracts of relevant papers, and wherever possible the full articles, were obtained. Searches were carried out using the British Library's AMED database

relevant papers published in the conventional medical literature. 'Grey' or unpublished literature was also sought. The grey literature databases SIGLE (System for Information on Grey Literature in Europe, available from SilverPlatter) and CISCOM (maintained by the Research Council for Complementary Medicine; www.rccm.org.uk) were searched for dissertations, and local and regional projects/reports.

Additional contributions were also gained through personal contacts and extant collaborations in TCAM work around the world. Major TCAM organizations in the various regions, and the country offices of the WHO, were also contacted and asked to provide local scientific papers, reports or journals about TCAM in their regions or countries. The Traditional Medicine Programme of WHO Kobe Centre was instrumental in connecting the various regional collaborators with the global coordinators at GIFTS of Health in Oxford thus facilitating the collection of information and materials.

## Mapping Preparation and Scoring

The revised indicator form (Annex 3) was used for scoring and categorization of the various background, structural and process indicators. The way in which scoring was conducted for the structural indicator maps in the volume is illustrated below.

### *General Overview Maps*

#### a) Maps on Legislation and Policy

The question "Is there an official TCAM policy?" was combined with the multi-part question "Is there TCAM legislation?" to provide a five-category score as follows:

0 = no data

1 = no legislation

2 = legislation pending, or in process of development

3 = legislation exists, but no known official policy

4 = official national policy exists

#### b) Maps on Public Sector Funding for TCAM

The question "Are there any financing systems that contribute to the provision of certain TCAM therapies in the public sector?" was organized into a simple three-category score as follows:

0 = no data

1 = no

2 = yes

#### c) Maps on Education and Regulation of TCAM

The question "Is there a ministry, institution or national expert committee whose mandate includes TCAM control, education, information and/or research?" was combined with the question "Is there a national voluntary self-regulatory mechanism or system for TCAM?" to provide these maps. This combination was organized into a five-category score as follows:

0 = no data

1 = no regulation or education

2 = presence of educational initiatives but no regulation

3 = presence of regulatory initiatives but no education

4 = presence of initiatives for both education and regulation

### *Practitioner Status Maps*

#### a) Legal recognition of TCAM practitioners by therapy

The question "Are any of these TCAM providers legally recognized:

i. herbalists

iii. traditional birth attendants/midwives
iv. traditional bone-setters/orthopaedists
v. Unani practitioners
vi. Ayurveda practitioners
vii. osteopaths
viii. chiropractors
ix. homeopaths
x. acupuncturists/practitioners of Chinese medicine
xi. others – please specify below?"

was utilized to score for the maps of the legal recognition of TCAM in each country. The scoring was a simple three-category score:

0 = no data/do not know

1 = no

2 = yes

### b) Conventional professionally-qualified health-care practitioners who are entitled to provide TCAM

Individual maps were constructed for physicians, nurses, physiotherapists, midwives and pharmacists utilizing data from the question "Which professionally qualified health care practitioners are entitled to provide TCAM therapies:

i. physicians with TCAM training
ii. physicians without TCAM training
iii. nurses with TCAM training
iv. nurses without TCAM training
v. physiotherapists with TCAM training
vi. physiotherapists without TCAM training
vii. midwives with TCAM training
viii. midwives without TCAM training?"

In addition, any mentions of pharmacists being qualified to provide TCAM was noted and scored to provide the maps for pharmacists.

The scoring for all of these maps was a six-category score encompassing:

0 = no data

1 = no TCAM provision at all, with or without training

2 = none of the listed TCAM therapies require recognized training

3 = a few or some TCAM therapies require recognized training

4 = most TCAM therapies require recognized training

5 = providing any TCAM therapy at all requires recognized training

## Mapping Process Data

The paucity of useable process information meant that, in all but a small minority of cases, maps of process data could only be produced from inferred data. A methodology was constructed to predict the popularity of individual TCAM therapies in all countries from which no suitable process information could be collected from the Ministry of Health or the regional coordinator.

### *Rationale for the creation of an inferred database*

The rationale was that any therapy for which a practitioner census had been conducted; for which there is legislation; which is publicly financed; for which professional organizations exist; for which academic research has been conducted; for which educational and training programmes exist, or

The secondary assumption was that popularity of any given therapy could be inferred from the number of the above indicator categories in which it is mentioned; the higher the number of mentions, the greater the popularity.

### *Creation of the National Popularity Measure (NPM) score for each therapy*

The unweighted NPM score is created by awarding 1 point to a therapy for each of the following indicators:

i. specific legislation (for practitioners or products)
ii. education (within or outside conventional health-care system)
iii. professional associations (with or without voluntary self-regulation status)
iv. public financing (insurance or free provision)
v. there is a census of the number of practitioners
vi. institutions exist for the therapy
vii. the therapy is listed as popular in the process section or published literature.

The maximum score, therefore, for any therapy in a given country is 7. The minimum is zero, which could denote either non-existence of the therapy, or absence of official recognition, or insufficient data on utilization and on formal recognition. The scores were then used to classify therapies into levels of popularity in the following way:

0 = therapy not used, or no data

1 = low popularity, or insufficient data to draw inferences (L)

2-3 = medium popularity (M)

4-7 = high popularity (H)

Attempts were made to rank therapies utilizing this simple schema. Maps were then produced using these levels of popularity, therapy by therapy, for herbal/traditional medicine, Ayurveda, other Indian systems of medicine, traditional Chinese medicine, acupuncture, osteopathy, chiropractic, homeopathy, bonesetting, aromatherapy and reflexology and other related therapies, massage and other manual therapies. In countries for which actual process information (in the form of an L, M, H or 0 score) was provided directly by the respective government or the regional coordinator, this score was used for mapping, in place of inferred data.

### *Creation of weighted scores for each therapy*

Analyses were conducted to correlate the inferred popularity of the various therapies with national gross domestic product. These analyses split each region into two national groupings: those with a gross domestic product greater than or equal to Int$ 15 000, and those with gross domestic product less than Int$ 15 000 (gross domestic product statistics were obtained from www.who.int for the year 2000). Int$ is a standardized currency that takes into account purchasing power parities.

Three thresholds were tested—Int$ 10 000, Int$ 15 000, and Int$ 20 000. The Int$ 10 000 threshold was rejected because several industrialized nations had poverty lines above this value. The Int$ 20 000 threshold was also rejected because it resulted in over-representation of countries in the low-income group, rendering all statistical comparisons meaningless because of the very small sample sizes in the high income group.

For these analyses, because comparisons were made between groups of countries, NPM scores were weighted to correct for countries with insufficient or no data. Student's *t*-test was then used to compare the weighted NPM scores (WNPM) for each therapy between countries with gross domestic product < Int$ 15 000 and ≥ Int$ 15 000. The following formula was used to calculate the WNPM for each therapy within a country:

$$\text{WNPM} = \text{NPM} \times Q \quad (1.1)$$

Where Q = the proportion of countries within the income band for which data are available.

Tables and figures showing the relative popularity of each therapy in lower and higher income countries are reported in Section E.1 of this volume, together with the *P* values for the complete table of t-tests. A further set of figures showing the popularity of different therapies by WHO region (ranked by regional WNPM, or rWNPM) is presented in Section E.2. For the regional comparisons, rWNPM scores were calculated as follows:

$$\text{rWNPM} = \text{NPM} \times \text{R} \quad (1.2)$$

Where R = the proportion of countries within the region for which data are available.

## Mapping

These weighted scores were entered into Microsoft Excel XP and standardized spreadsheets were produced and transmitted to the mapping group at the London School of Hygiene and Tropical Medicine. The scores were transferred to the geographical information system (GIS) ArcGIS 8.3 to produce the maps. The first draft set of maps was used alongside the tables for expert review and adjustment where necessary.

It is important to note with regard to the maps, the designations employed and the presentation of material on the maps used in this Global Atlas do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Coloured dots have been used on some maps to represent the smaller "island" countries which are too small to show up clearly. These have only been used where there are data for the country.

## Conclusion

The maps in this Global Atlas reflect the level of detail available in the data which was used for their construction and reinforce the need for standardization of future data collection initiatives. Overall, the results highlight the need for regular national, regional and international surveys on TCAM utilization trends, safety reporting, economic studies and policy analyses of different regulatory strategies and their impact on service delivery and consumer satisfaction.

## Reference

1. *Global Information on Traditional Medicine/Complementary and Alternative Medicine Practices and Utilization. Proceedings of an International Consultative Meeting, Kobe, Japan, 19–21 September 2001.* Kobe, WHO Centre for Health Development, World Health Organization, 2001.

# MAPS, FIGURES AND TABLES

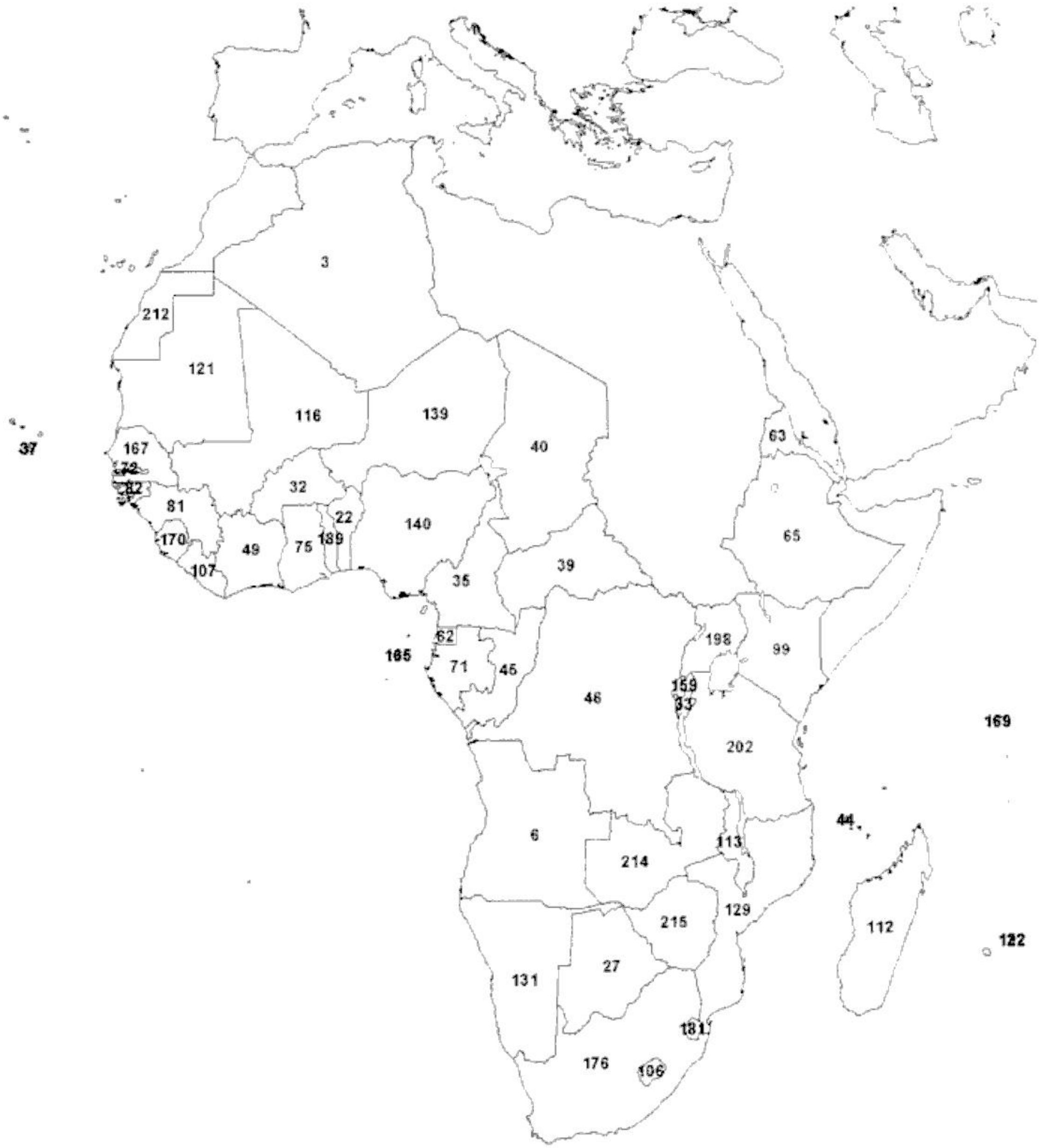
## Table of Atlas Code Numbers, Names of Countries, Areas and Territories

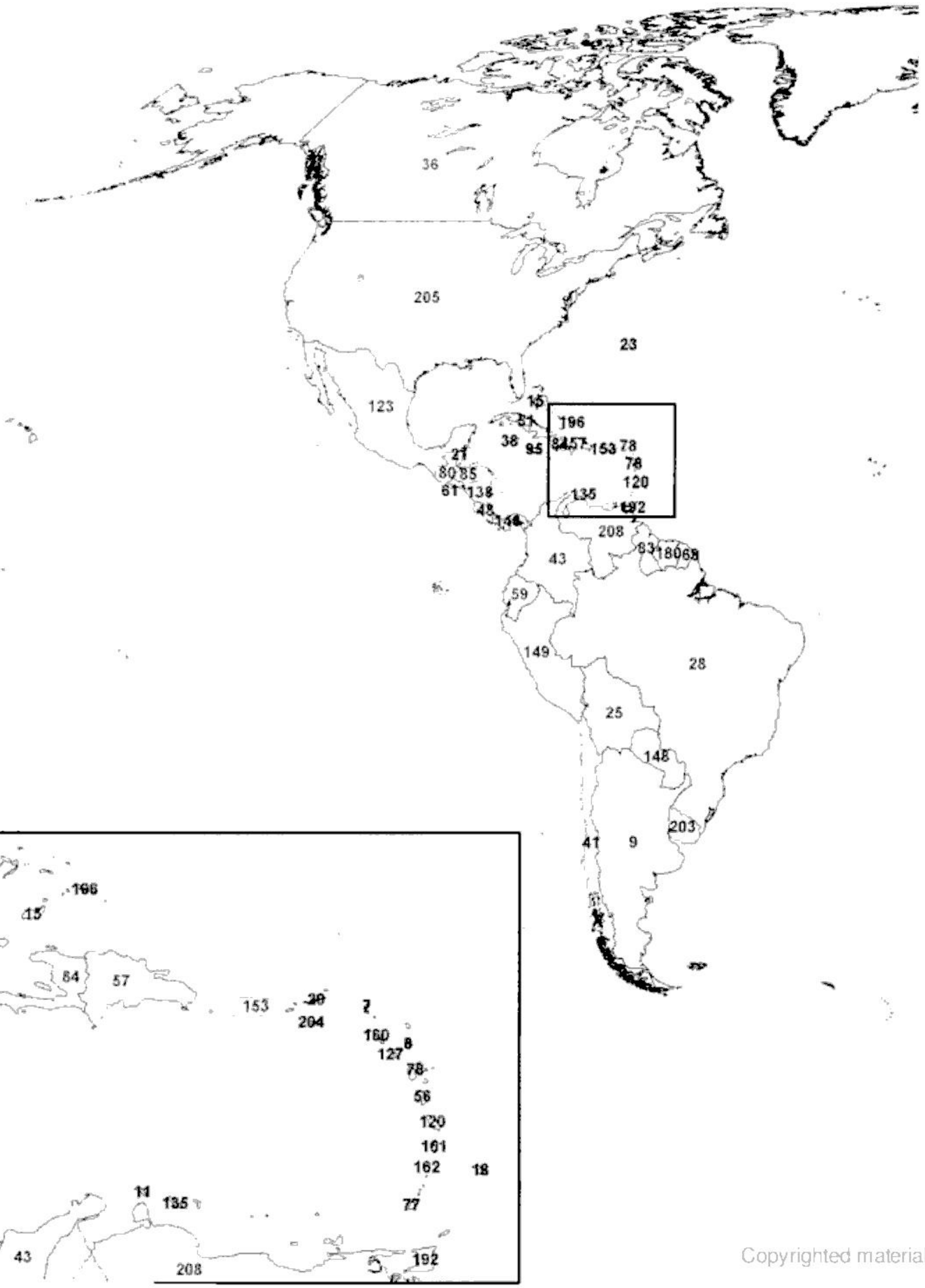
1. Afghanistan
2. Albania
3. Algeria
4. American Samoa
5. Andorra
6. Angola
7. Anguilla
8. Antigua and Barbuda
9. Argentina
10. Armenia
11. Aruba
12. Australia
13. Austria
14. Azerbaijan
15. Bahamas
16. Bahrain
17. Bangladesh
18. Barbados
19. Belarus
20. Belgium
21. Belize
22. Benin
23. Bermuda
24. Bhutan
25. Bolivia
26. Bosnia and Herzegovina
27. Botswana
28. Brazil
29. British Virgin Islands
30. Brunei Darussalam
31. Bulgaria
32. Burkina Faso
33. Burundi
34. Cambodia
35. Cameroon
36. Canada
37. Cape Verde
38. Cayman Islands
39. Central African Republic
40. Chad
41. Chile
42. China
43. Colombia
44. Comoros
45. Congo
46. Congo, Democratic Republic of the
47. Cook Islands
48. Costa Rica
49. Cote d'Ivoire
50. Croatia
51. Cuba
52. Cyprus
53. Czech Republic
54. Denmark
55. Djibouti
56. Dominica
57. Dominican Republic
58. DPR Korea
59. Ecuador
60. Egypt
61. El Salvador
62. Equatorial Guinea
63. Eritrea
64. Estonia
65. Ethiopia
66. Fiji
67. Finland
68. France
69. French Guiana
70. French Polynesia
71. Gabon
72. Gambia
73. Georgia
74. Germany
75. Ghana
76. Greece
77. Grenada
78. Guadeloupe (French Antilles)
79. Guam
80. Guatemala
81. Guinea
82. Guinea-Bissau
83. Guyana
84. Haiti
85. Honduras
86. Hungary
87. Iceland
88. India
89. Indonesia
90. Iran (Islamic Republic of)
91. Iraq
92. Ireland
93. Israel
94. Italy
95. Jamaica
96. Japan
97. Jordan
98. Kazakhstan
99. Kenya
100. Kiribati
101. Kuwait
102. Kyrgyzstan
103. Lao PDR
104. Latvia
105. Lebanon
106. Lesotho
107. Liberia
108. Libyan Arab Jamahiriya
109. Liechtenstein
110. Lithuania
111. Luxembourg
112. Madagascar
113. Malawi

114. Malaysia
115. Maldives
116. Mali
117. Malta
118. Mariana Islands
119. Marshall Islands
120. Martinique
121. Mauritania
122. Mauritius
123. Mexico
124. Micronesia, Federated States of
125. Monaco
126. Mongolia
127. Montserrat
128. Morocco
129. Mozambique
130. Myanmar
131. Namibia
132. Nauru
133. Nepal
134. Netherlands
135. Netherlands Antilles
136. New Caledonia
137. New Zealand
138. Nicaragua
139. Niger
140. Nigeria
141. Niue
142. Norway
143. Oman
144. Pakistan
145. Palau
146. Panama
147. Papua New Guinea
148. Paraguay
149. Peru
150. Philippines
151. Poland
152. Portugal
153. Puerto Rico
154. Qatar
155. Republic of Korea
156. Republic of Moldova
157. Romania
158. Russian Federation
159. Rwanda
160. Saint Kitts and Nevis
161. Saint Lucia
162. Saint Vincent and Grenadines
163. Samoa
164. San Marino
165. Sao Tome and Principe
166. Saudi Arabia
167. Senegal
168. Serbia and Montenegro
169. Seychelles
170. Sierra Leone
171. Singapore
172. Slovakia
173. Slovenia
174. Solomon Islands
175. Somalia
176. South Africa
177. Spain
178. Sri Lanka
179. Sudan
180. Suriname
181. Swaziland
182. Sweden
183. Switzerland
184. Syrian Arab Republic
185. Tajikistan
186. Thailand
187. The Former Yugoslav Republic of Macedonia
188. Timor-Leste
189. Togo
190. Tokelau
191. Tonga
192. Trinidad and Tobago
193. Tunisia
194. Turkey
195. Turkmenistan
196. Turks and Caicos Islands
197. Tuvalu
198. Uganda
199. Ukraine
200. United Arab Emirates
201. United Kingdom of Great Britain and Northern Ireland
202. United Republic of Tanzania
203. Uruguay
204. US Virgin Islands
205. United States of America
206. Uzbekistan
207. Vanuatu
208. Venezuela
209. Viet Nam
210. Wallis and Futuna Islands
211. West Bank and Gaza
212. Western Sahara
213. Yemen
214. Zambia
215. Zimbabwe

WHO REGIONS

- African Region
- Region of the Americas
- Eastern Mediterranean Region
- European Region
- South-East Asia Region
- Western Pacific Region



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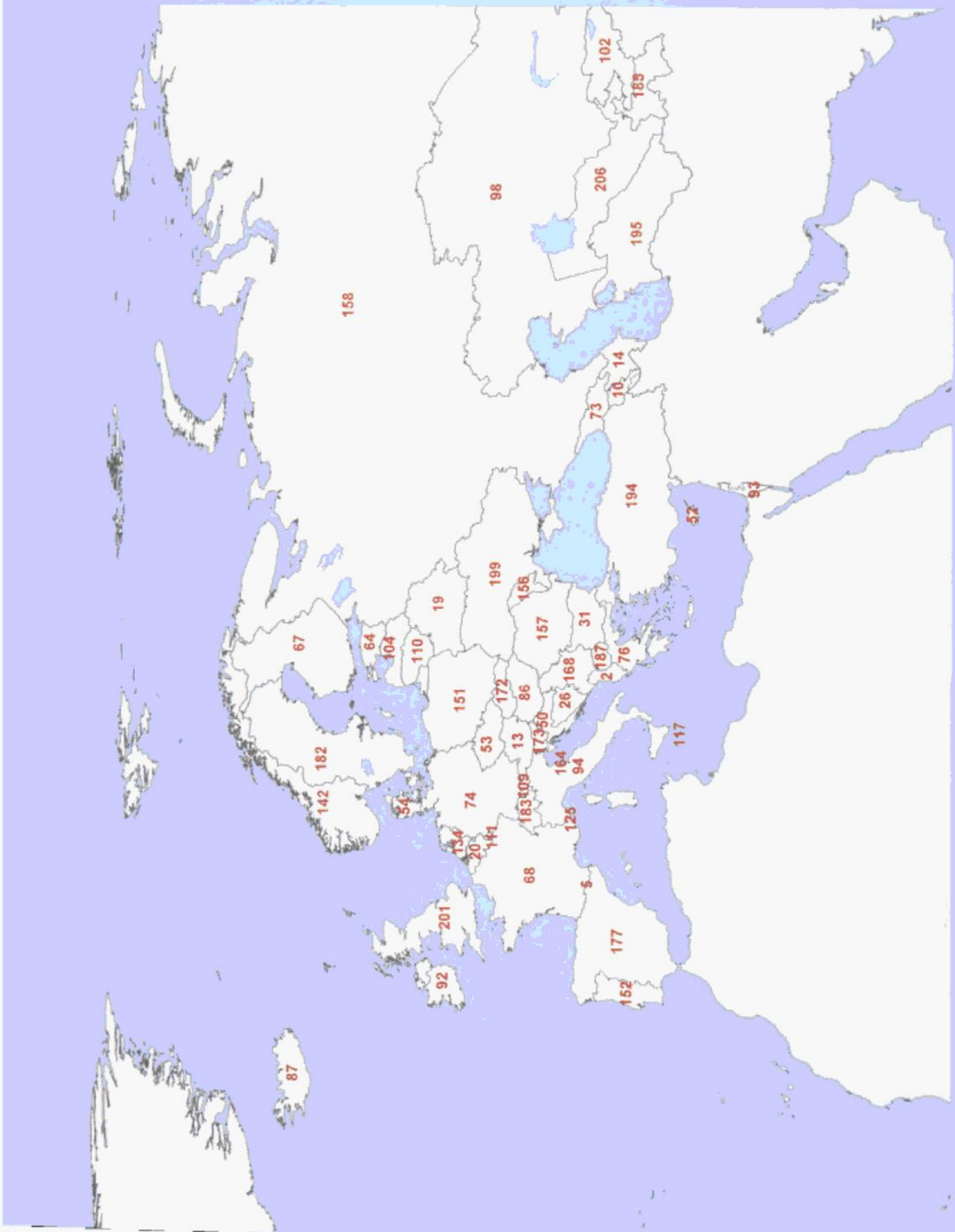
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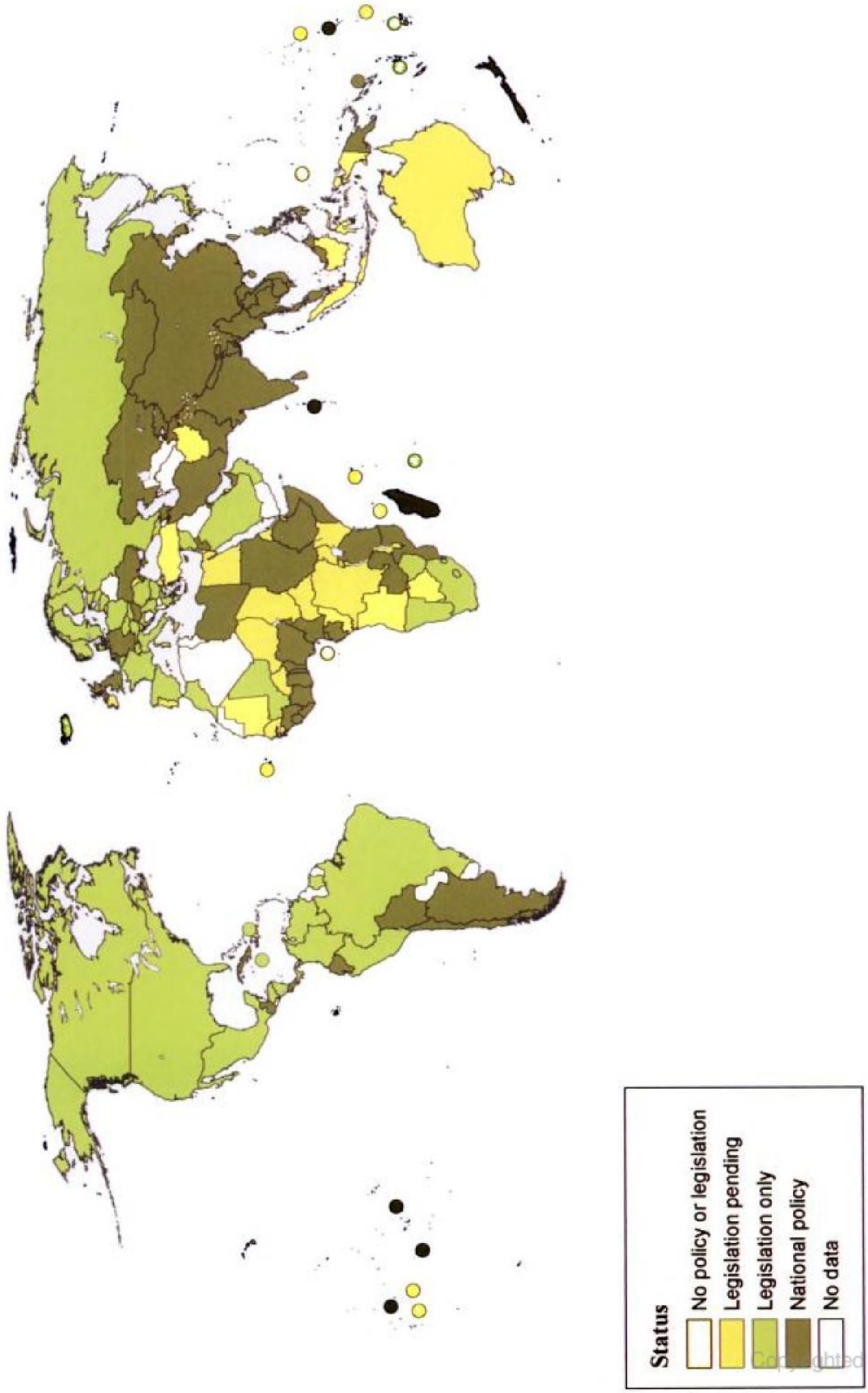
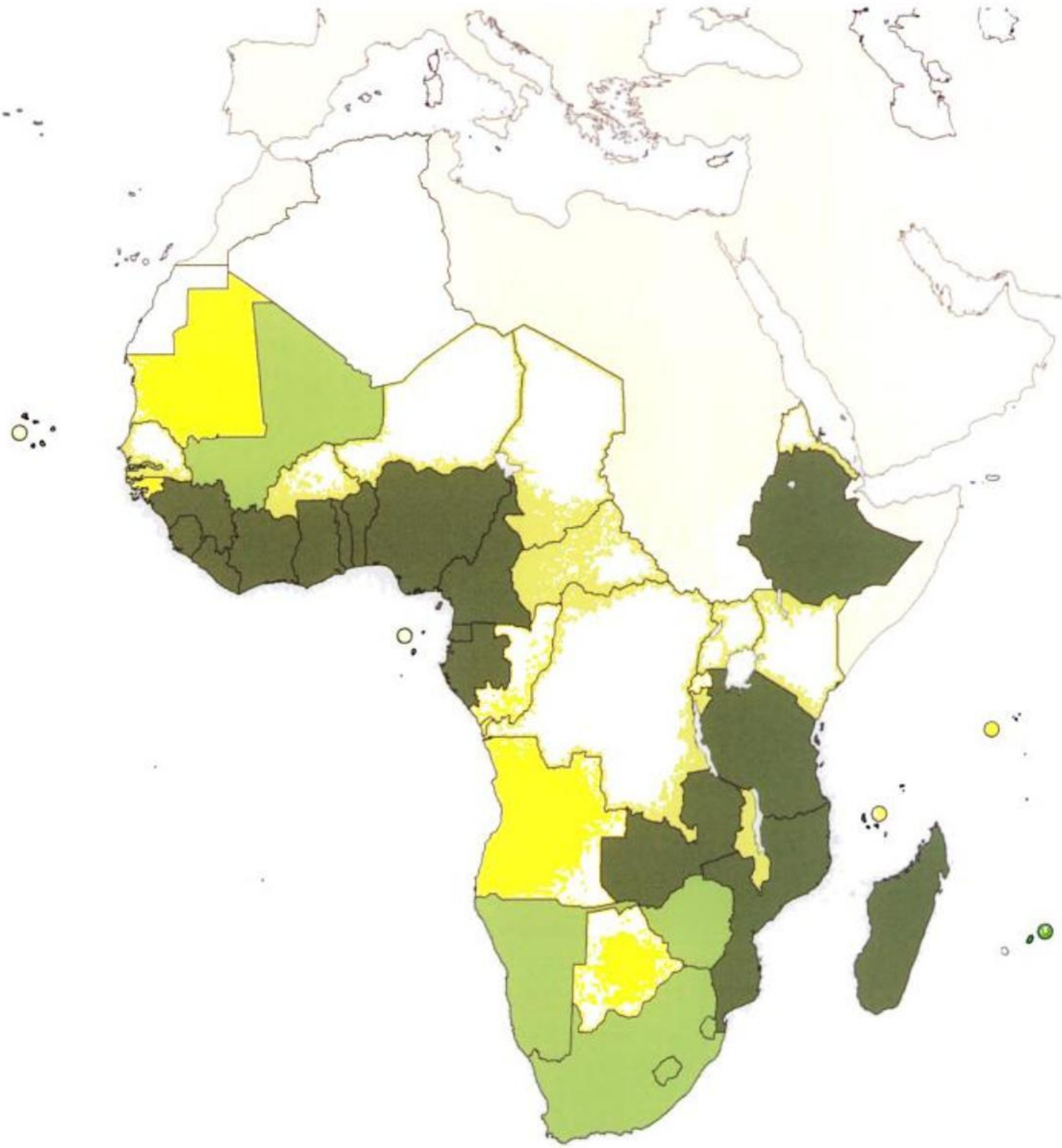
SECTION A.

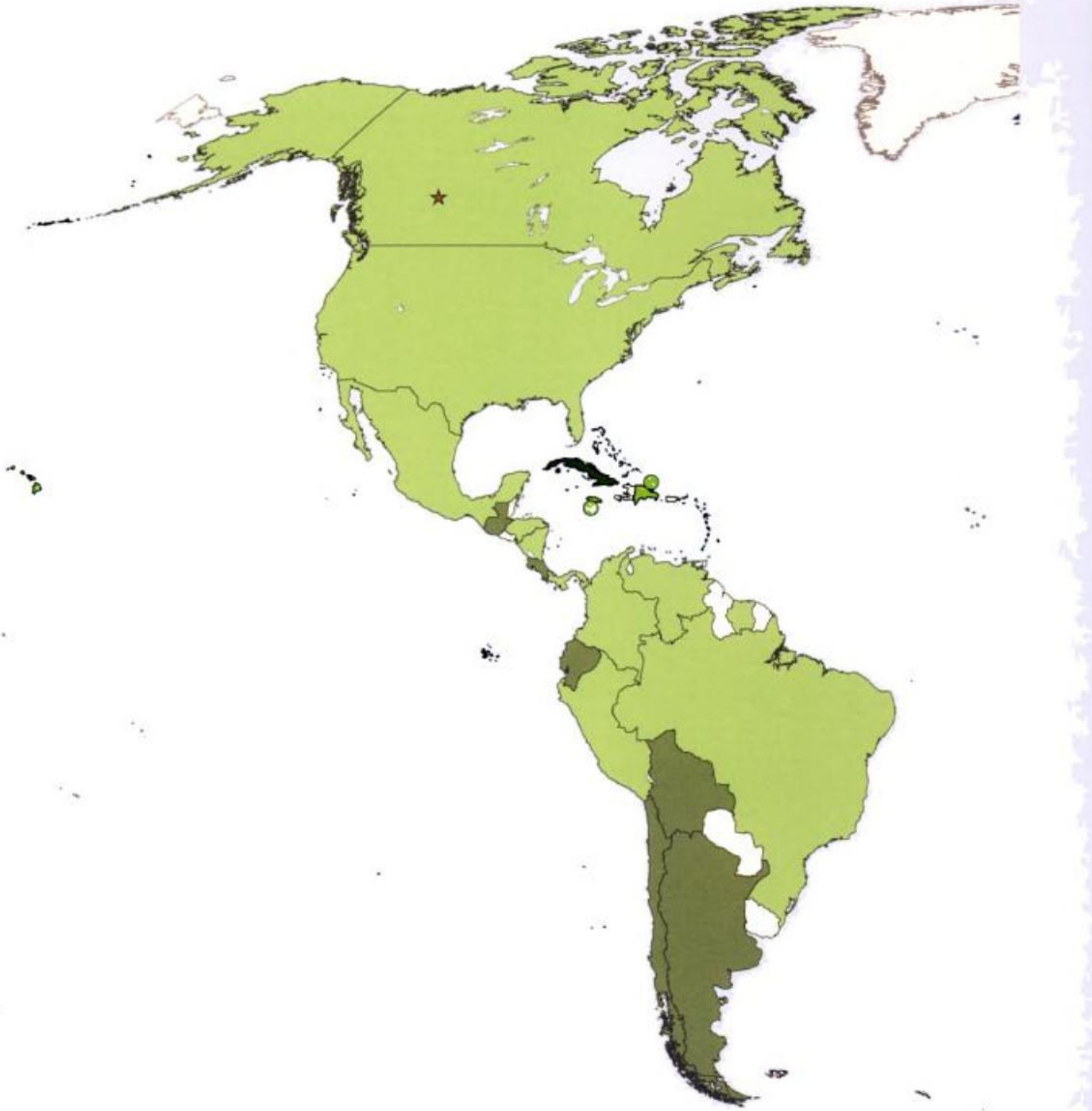
# THE BROAD STRUCTURES OF TCAM GLOBALLY AND BY WHO REGION

## *POLICY AND LEGISLATION ON TCAM*

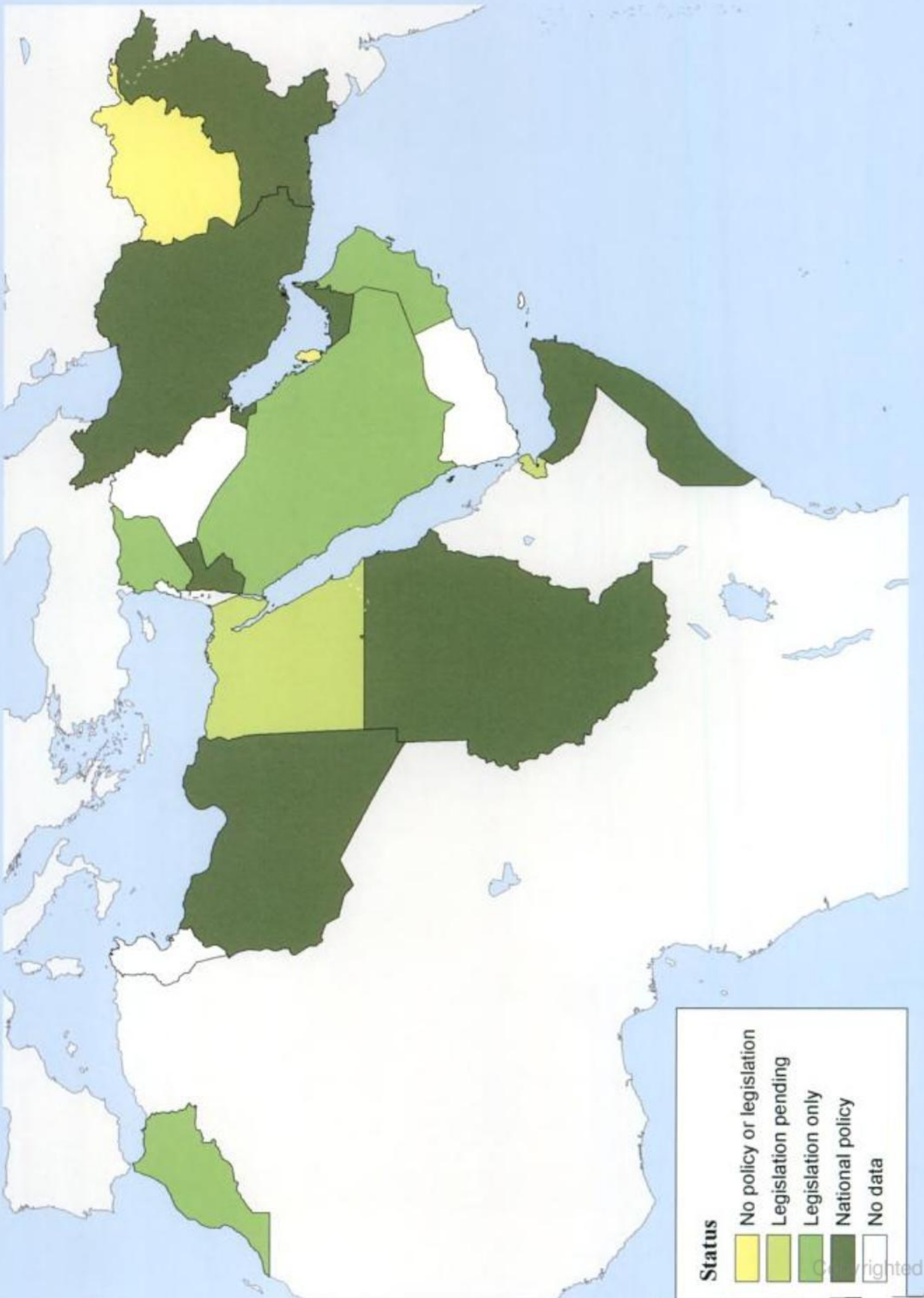


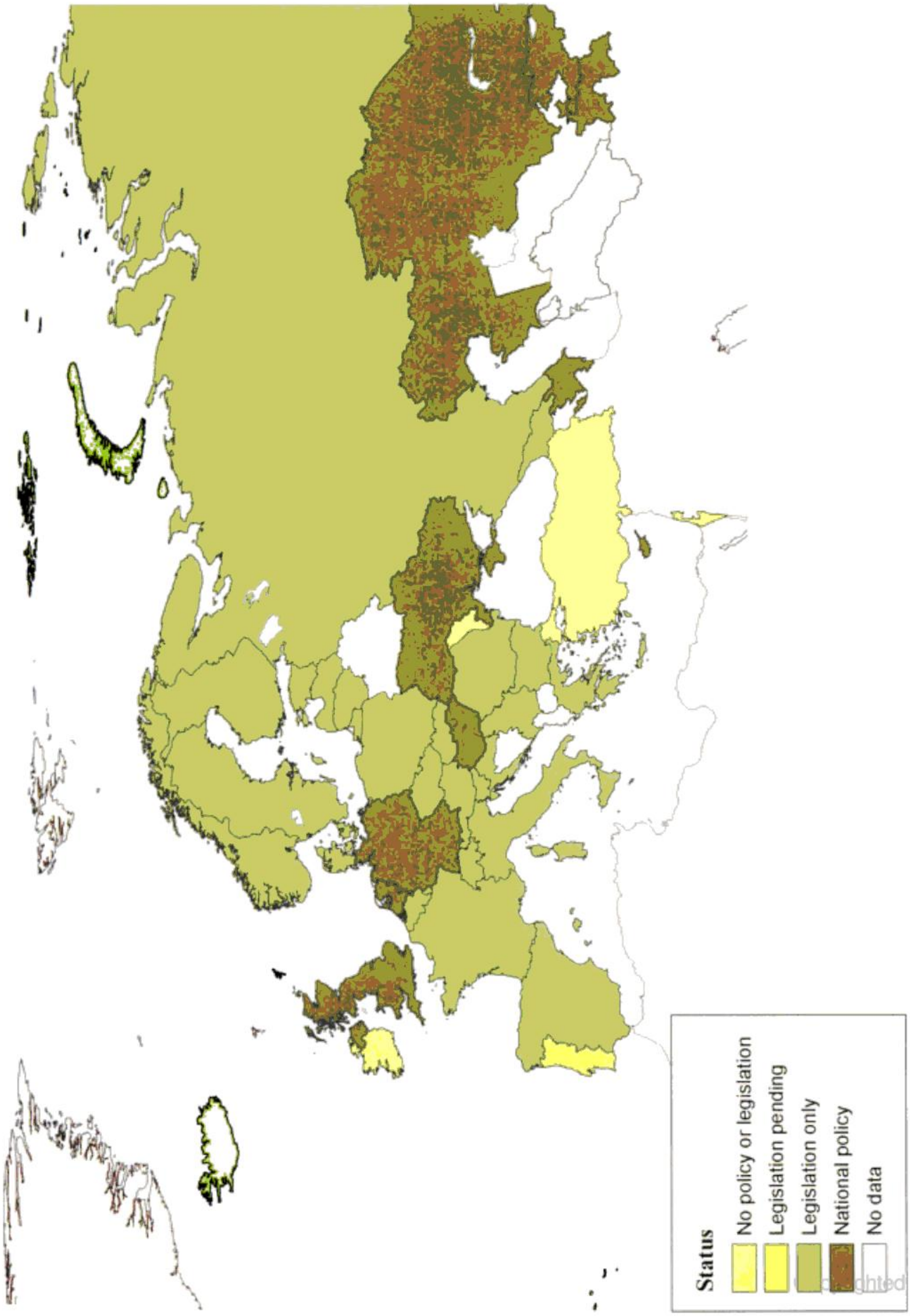


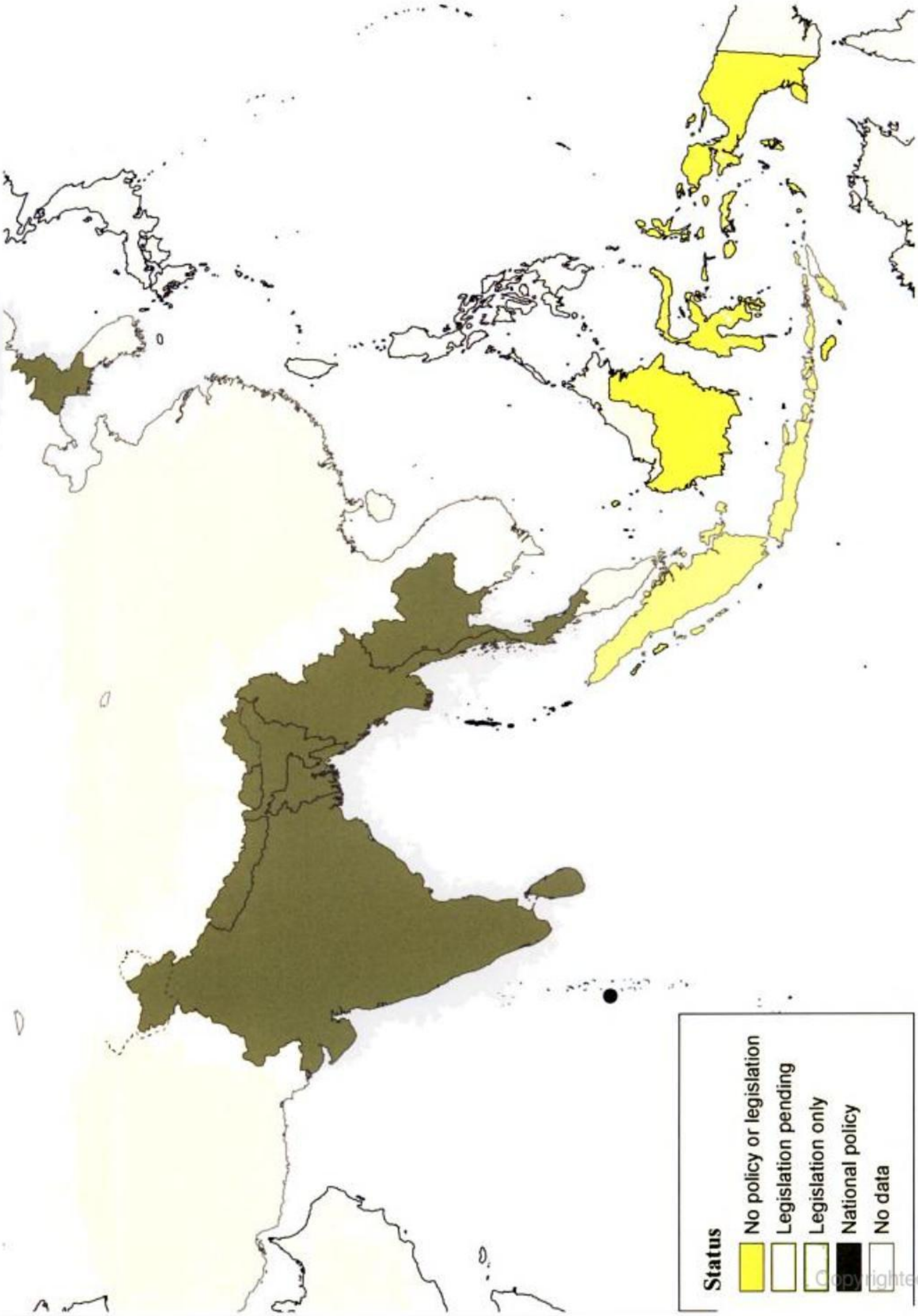
# A1b. POLICY AND LEGISLATION ON TCAM – AMR



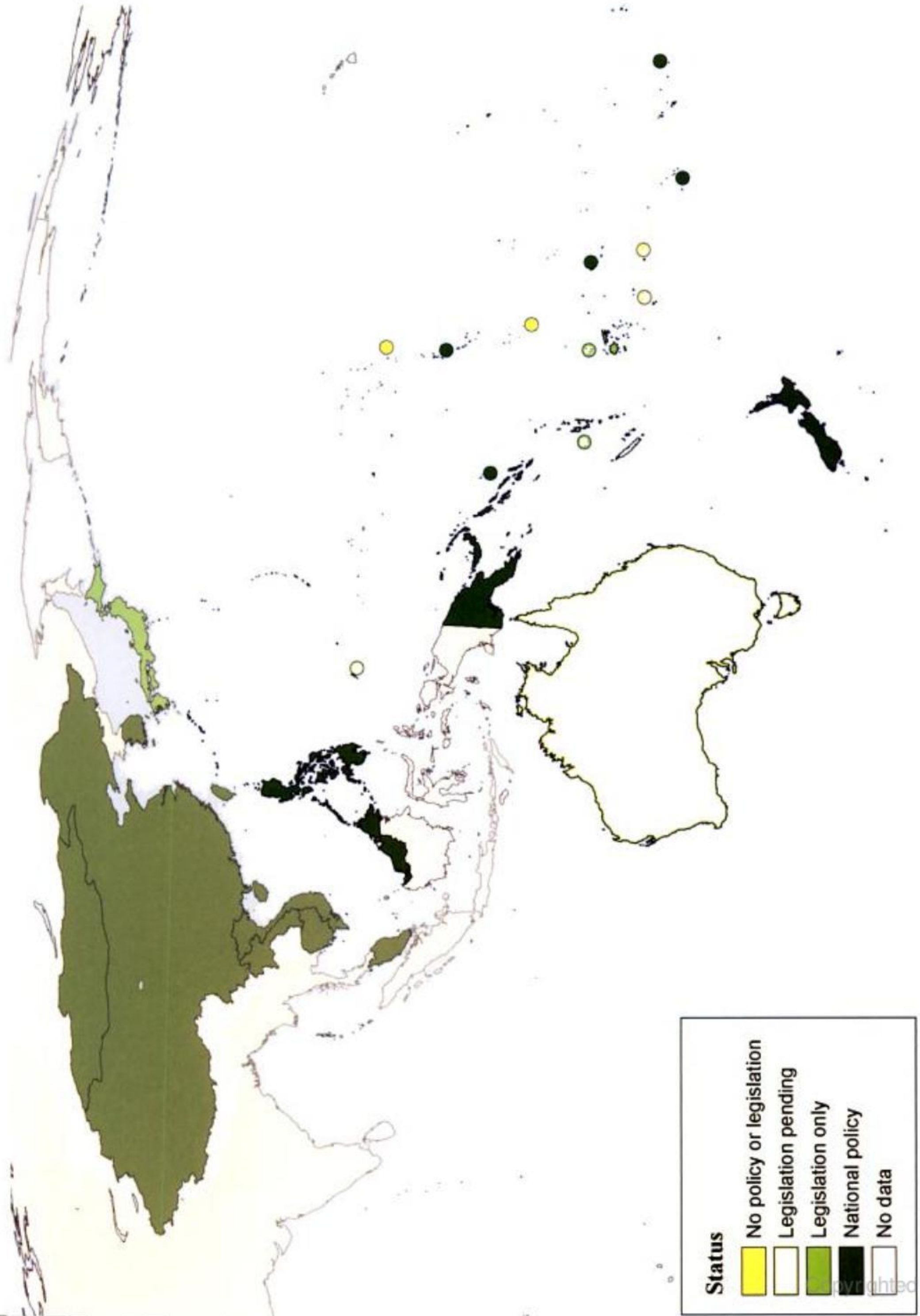

★ National policy on product regulation only





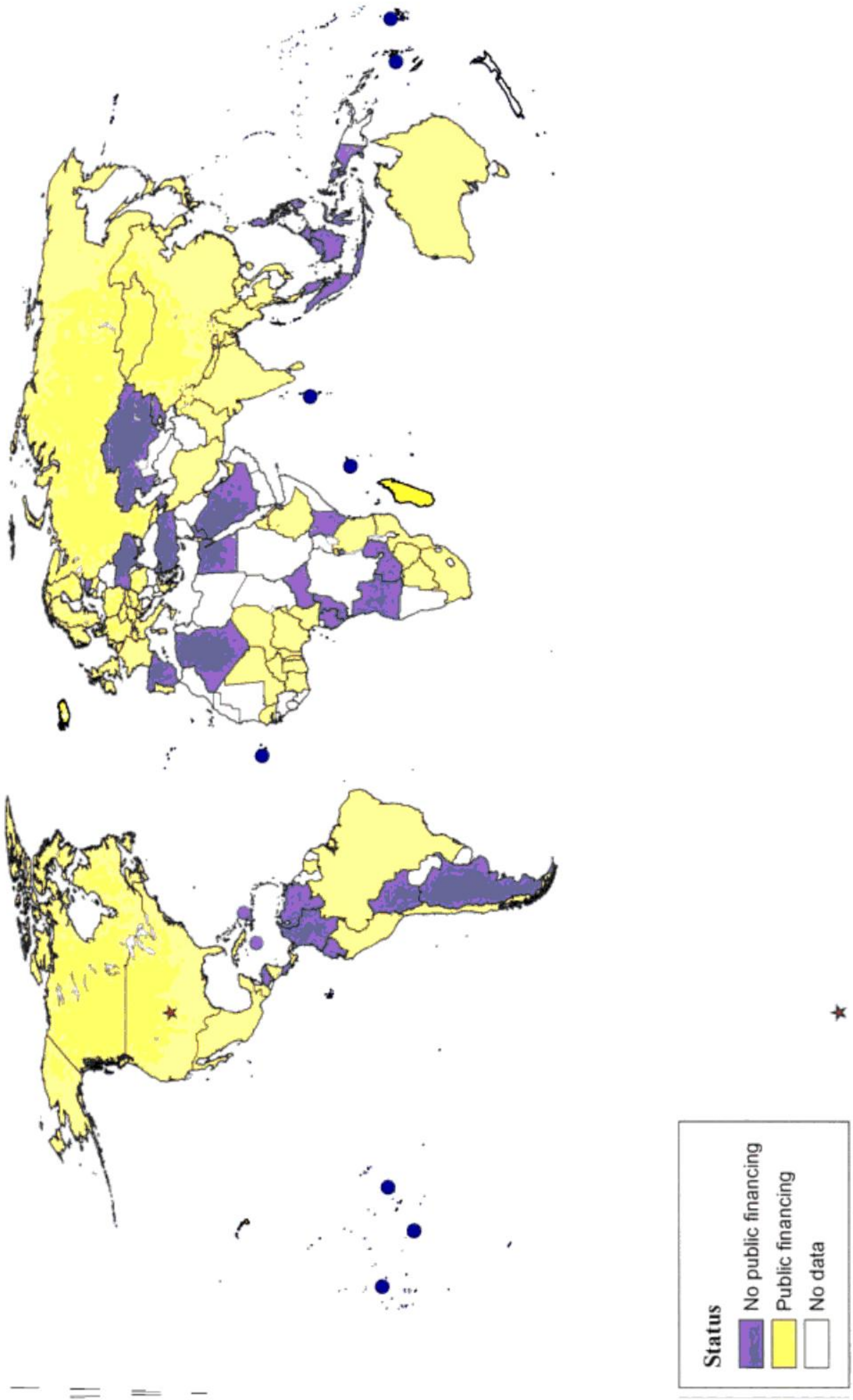


# A1f. POLICY AND LEGISLATION ON TCAM – WPR

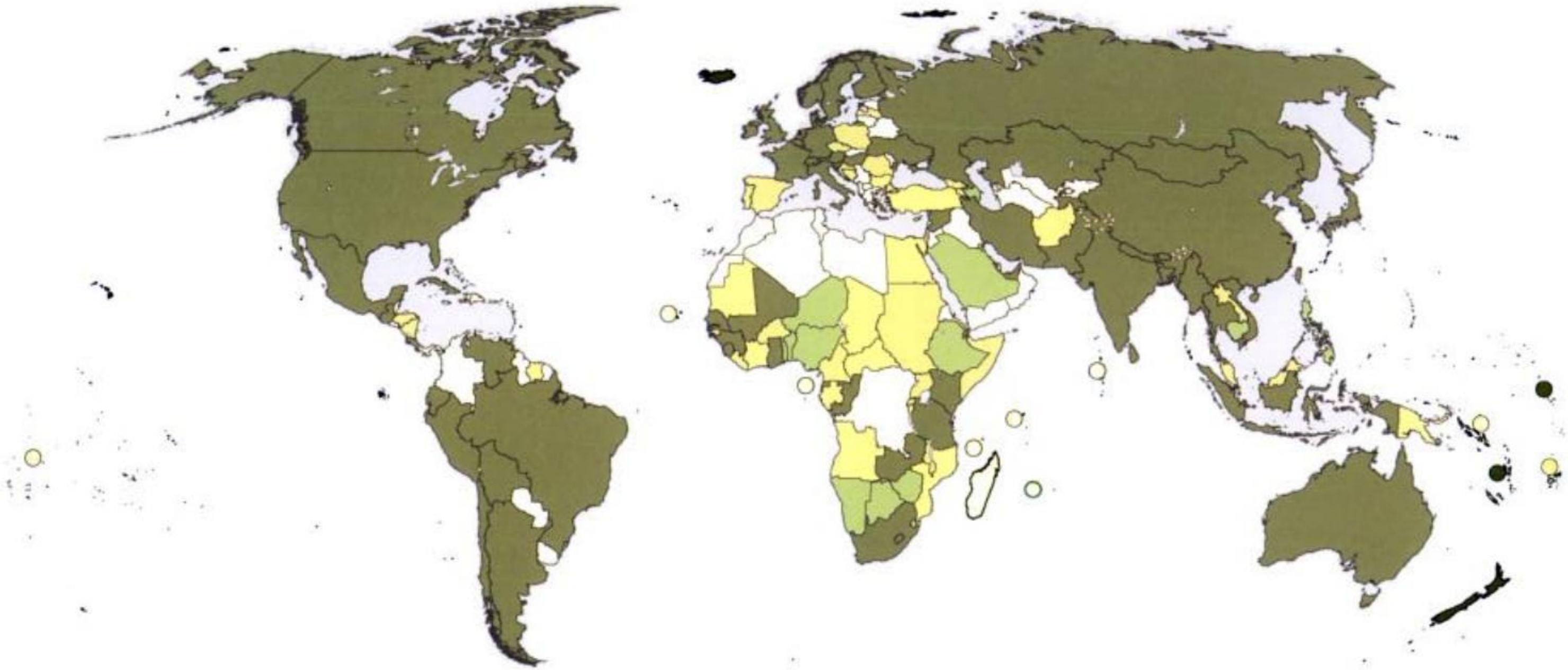


# PUBLIC FINANCING FOR TCAM

# A2. PUBLIC FINANCING FOR TCAM – GLOBAL

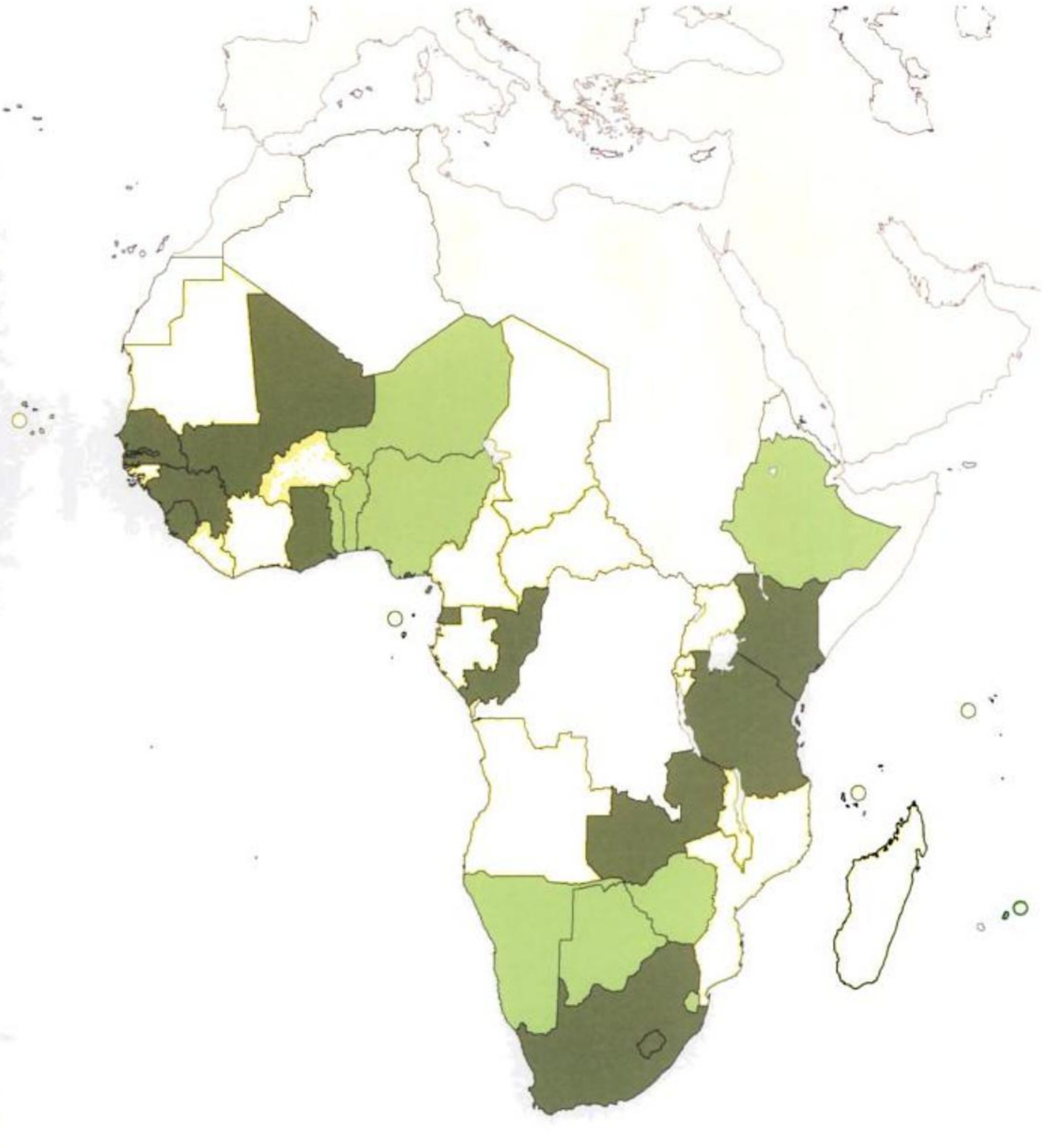


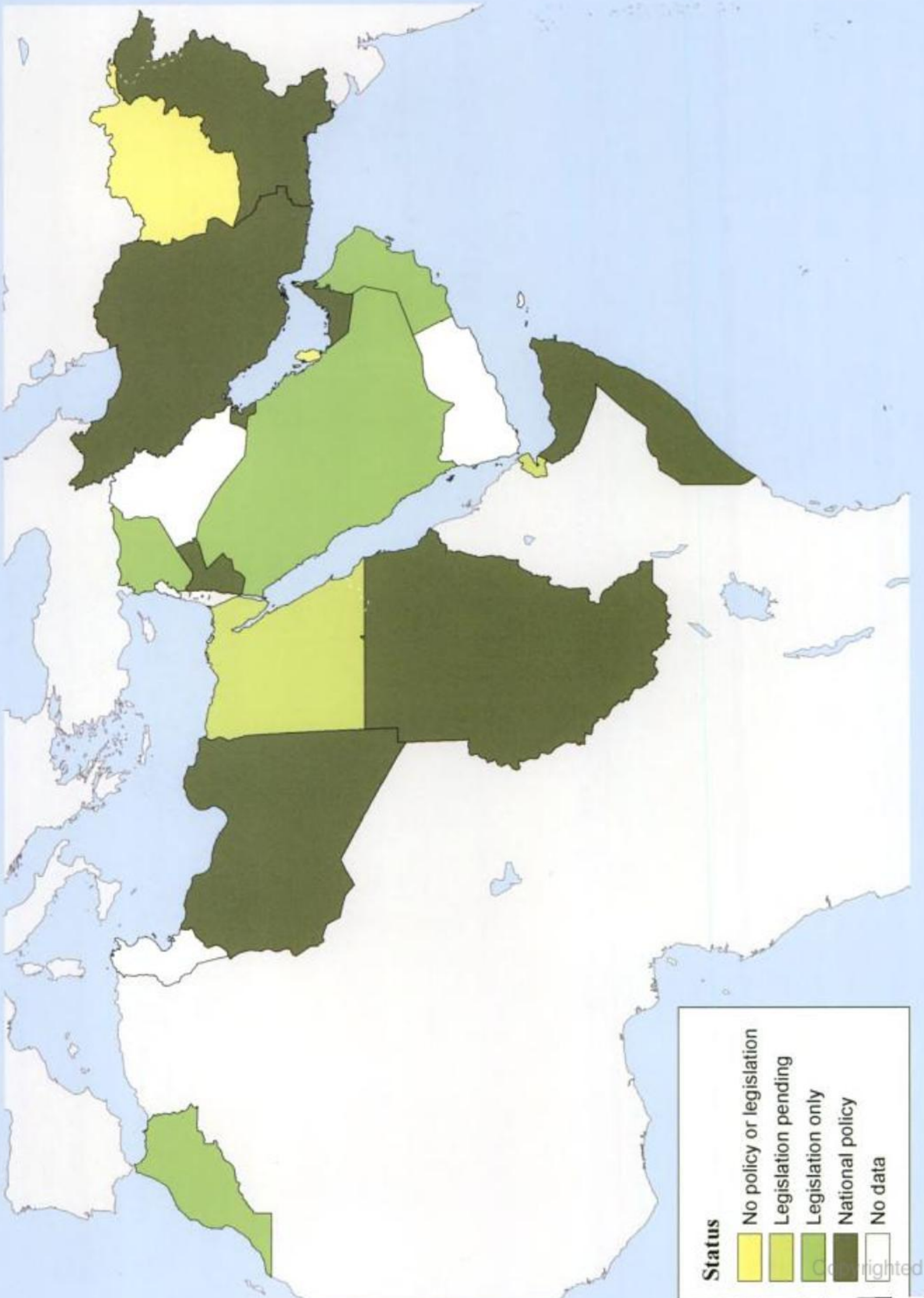
# EDUCATION AND REGULATION IN TCAM



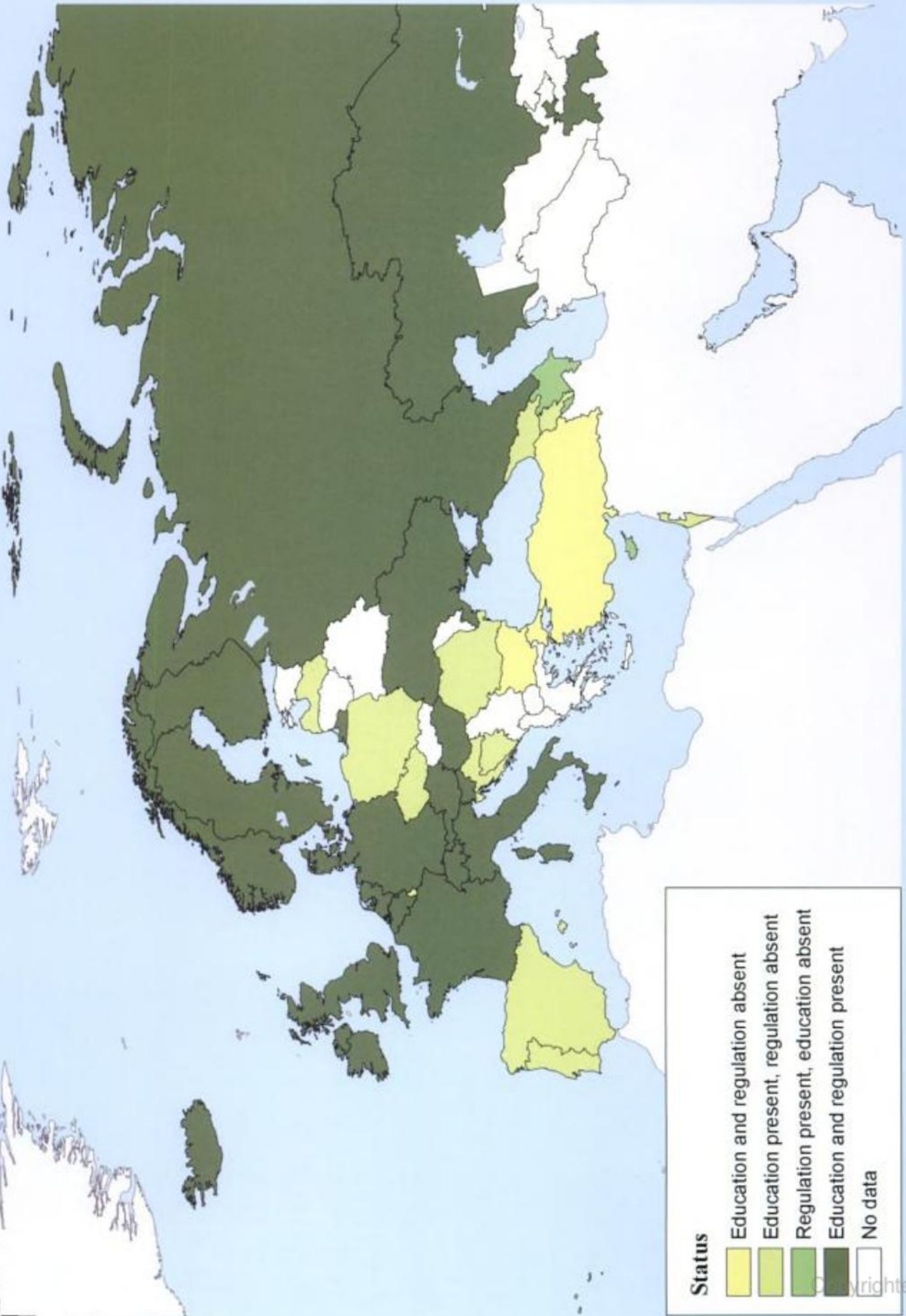
**Status**

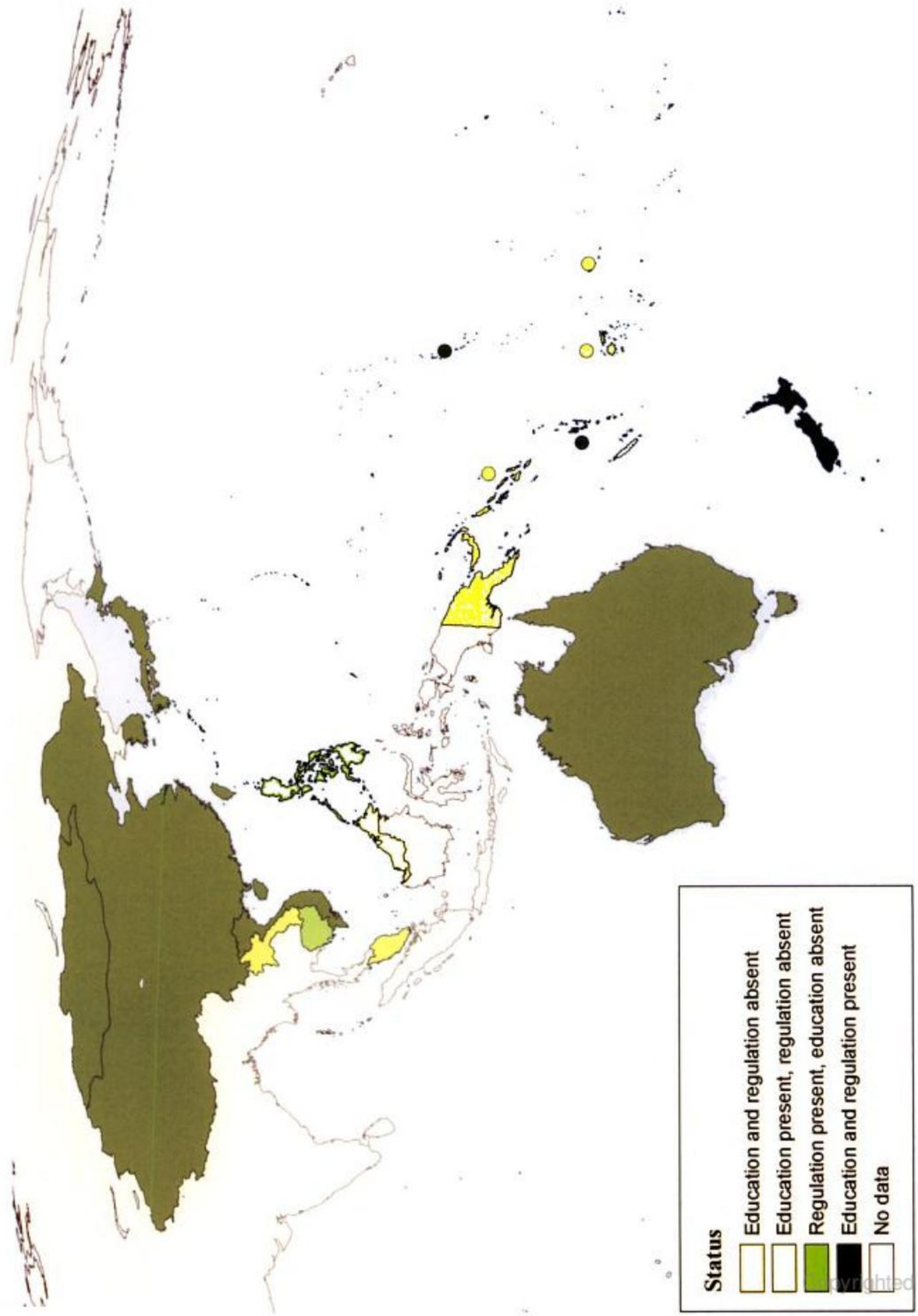
- Education and regulation absent
- Education present, regulation absent
- Regulation present, education absent
- Education and regulation present
- No data





# A3d. EDUCATION AND REGULATION FOR TCAM – EUR

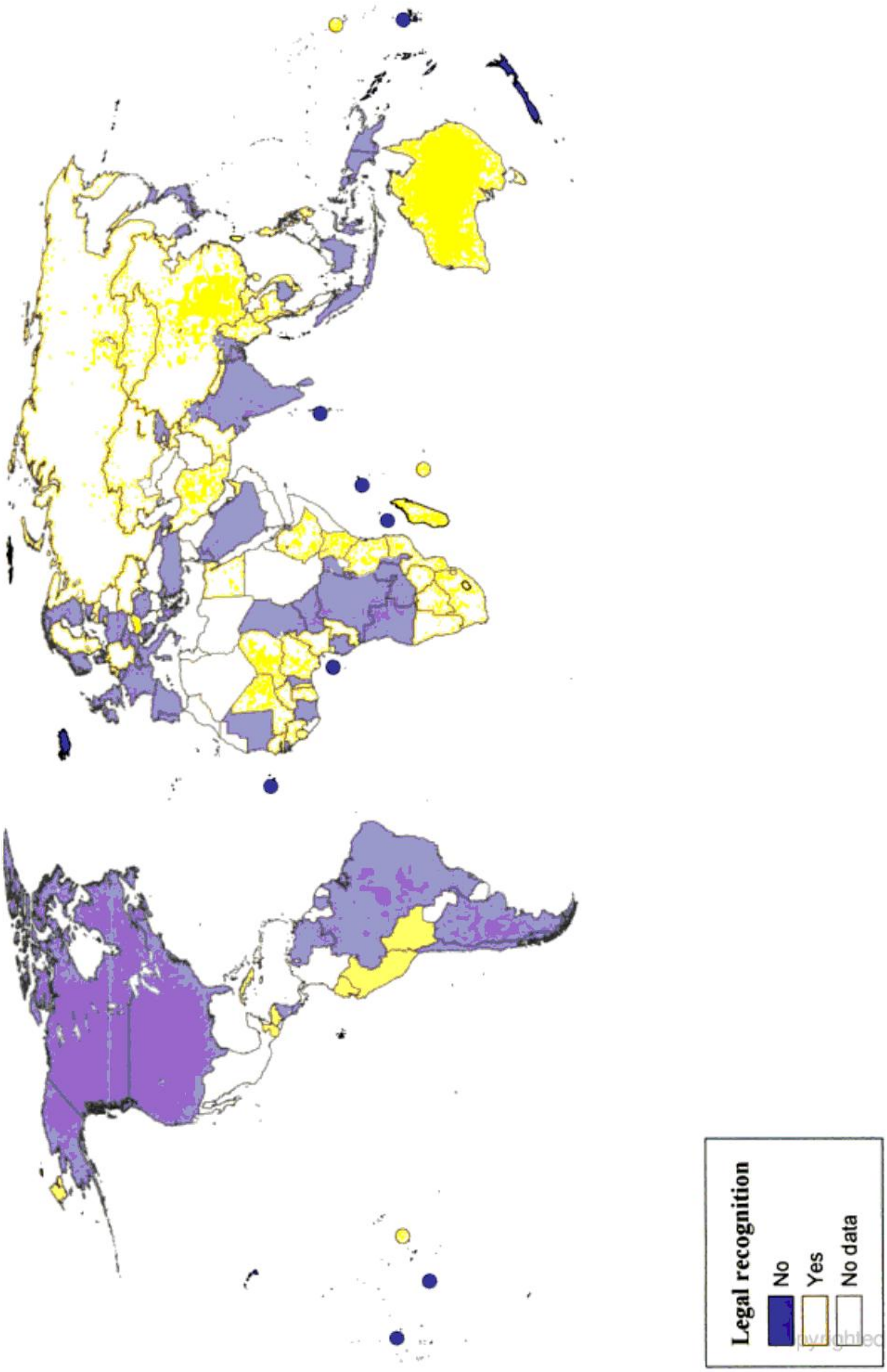


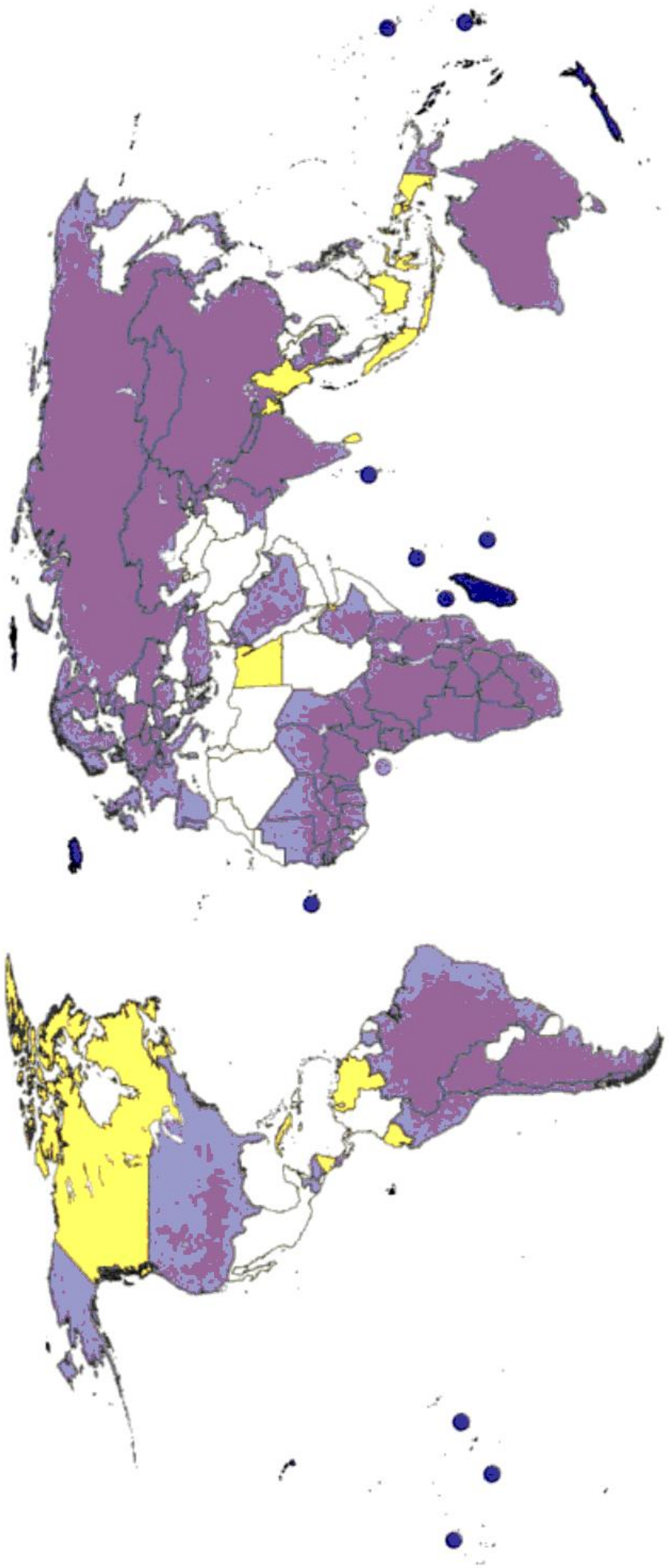


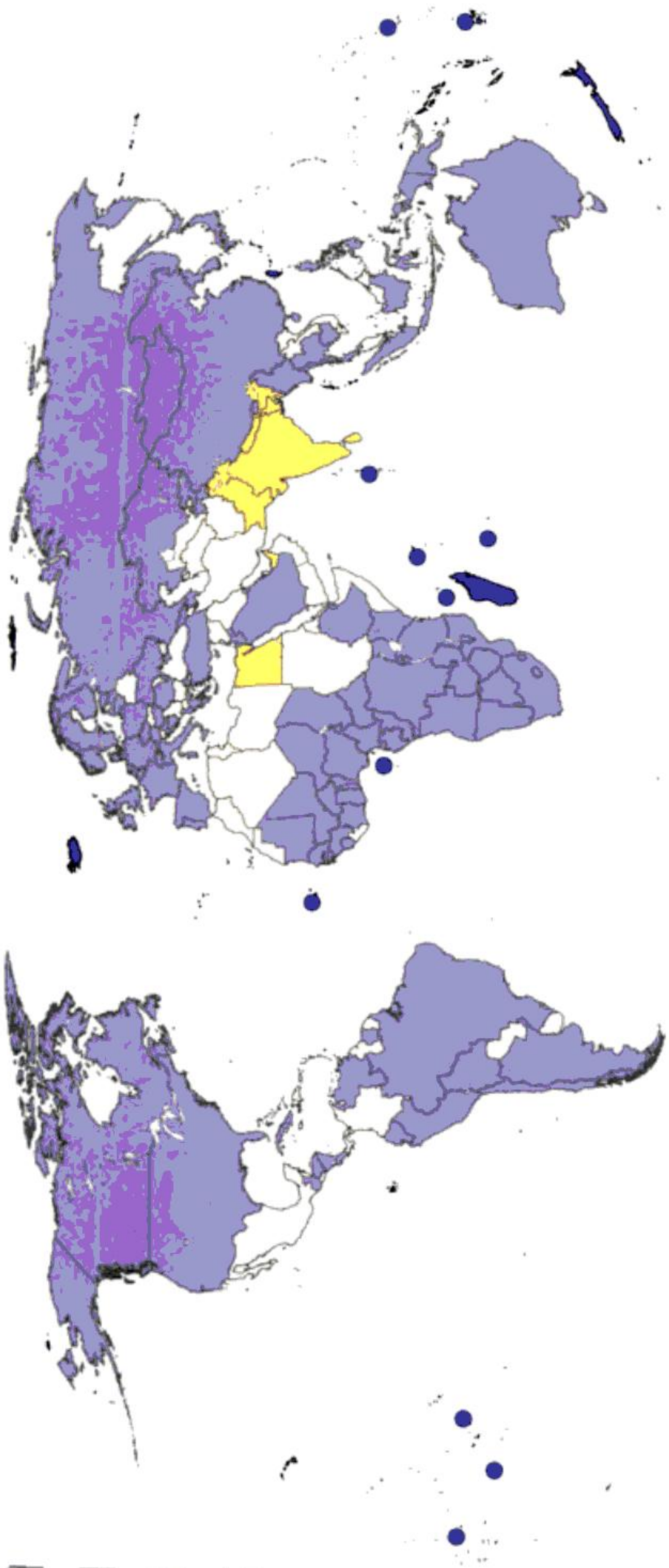
SECTION B.

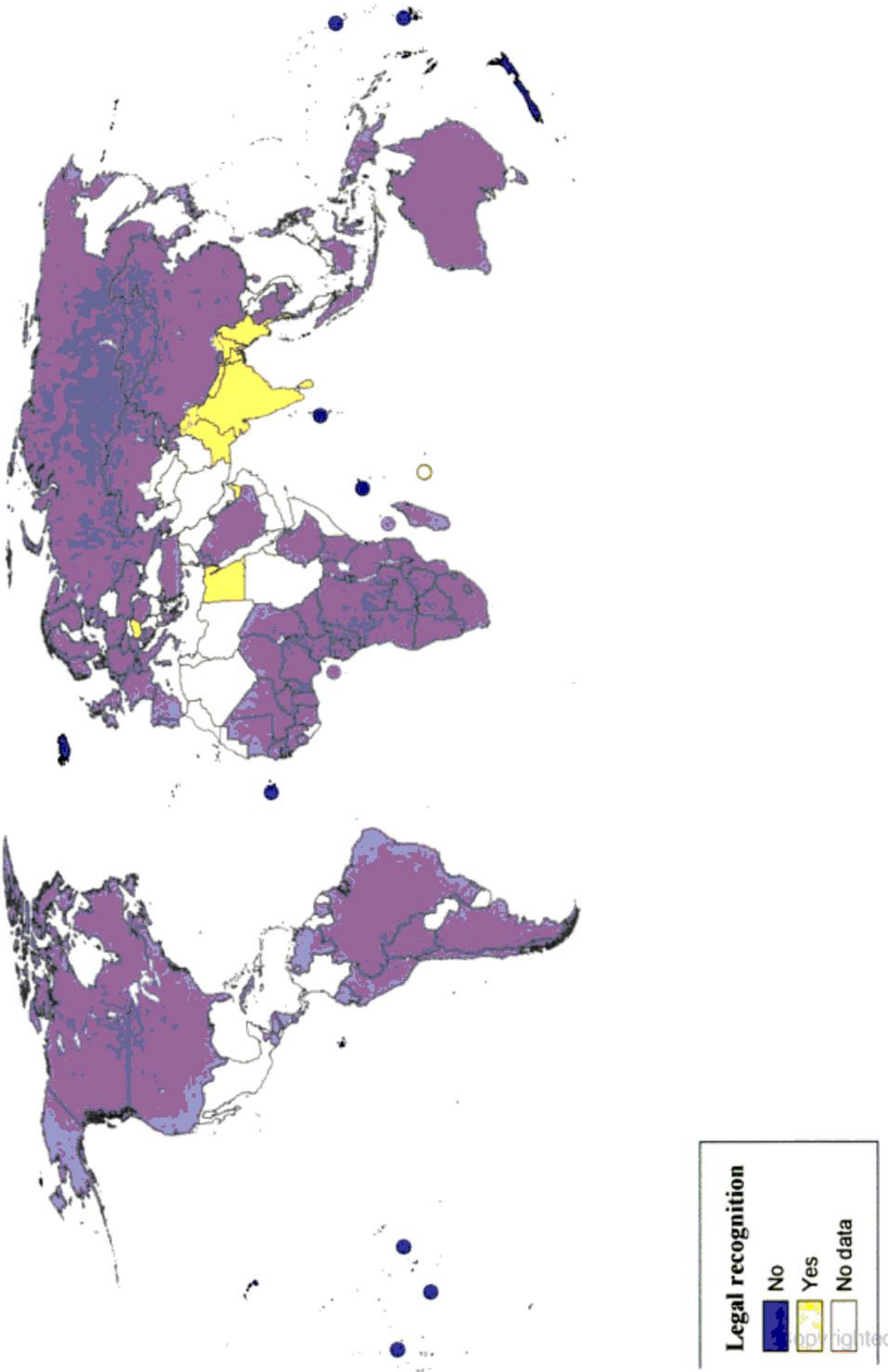
# LEGAL RECOGNITION OF TCAM PRACTITIONERS BY THERAPY

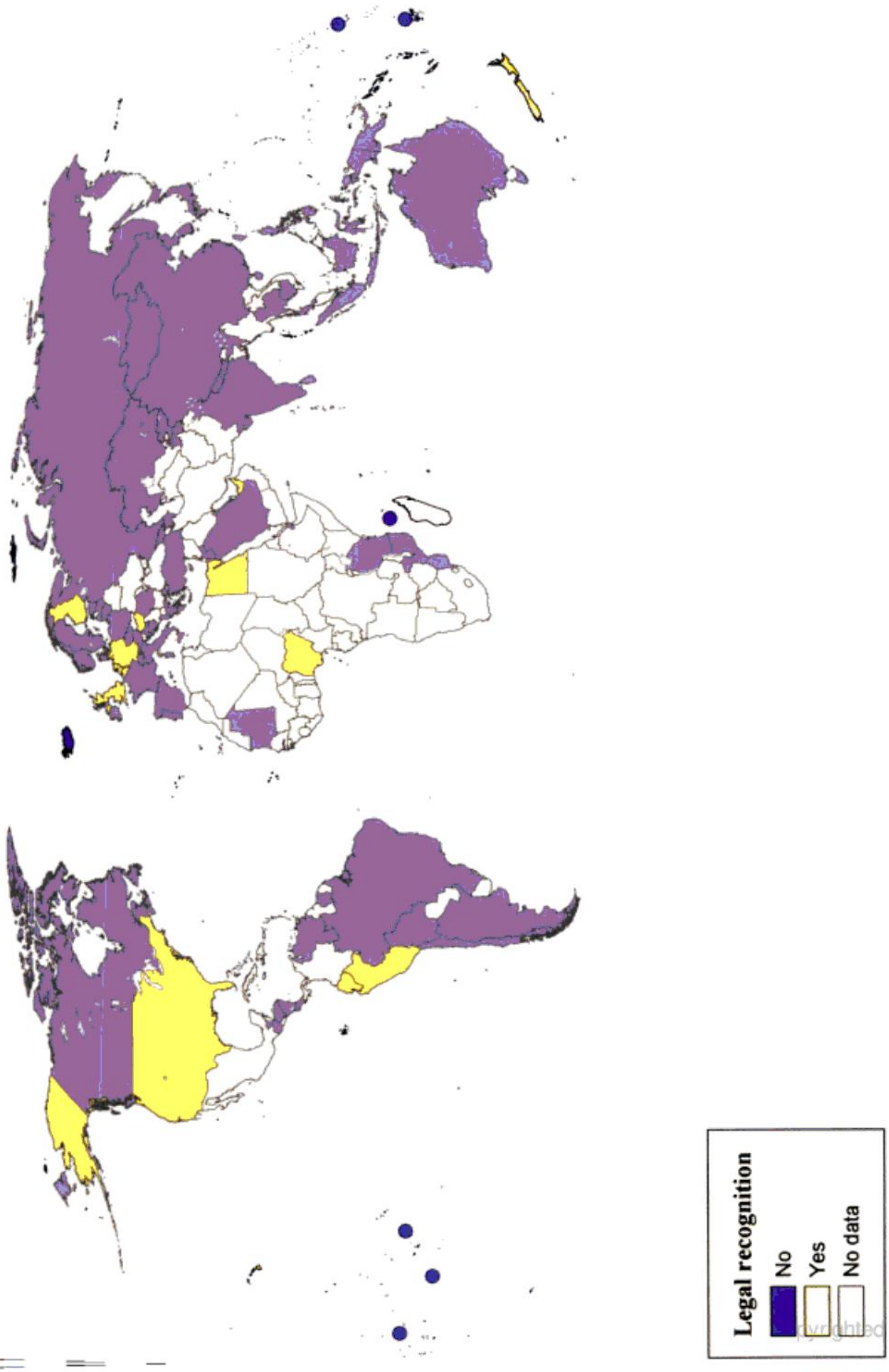
# B1. LEGAL RECOGNITION OF HERBALISTS AND TRADITIONAL HEALTH PRACTITIONERS

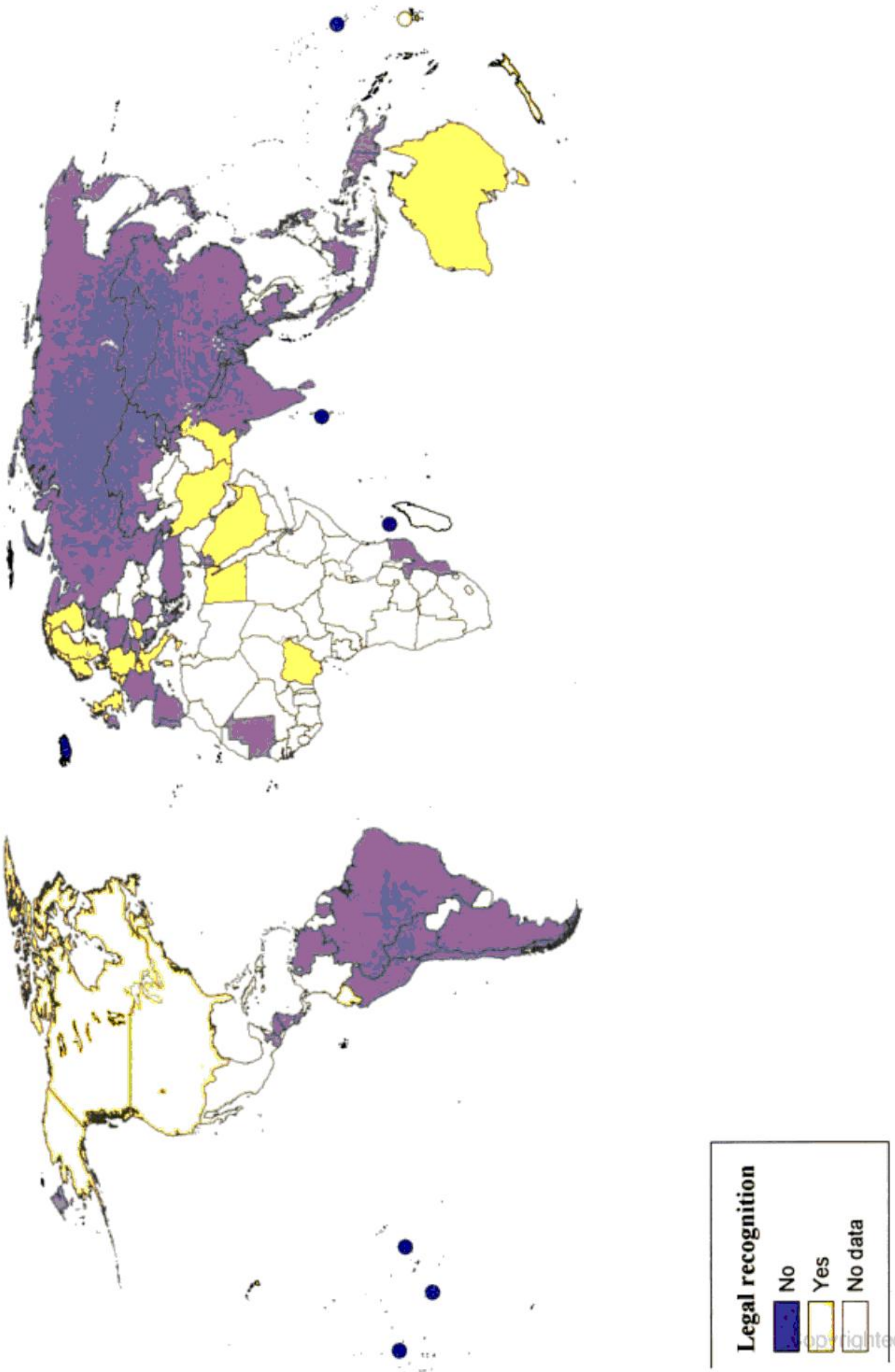


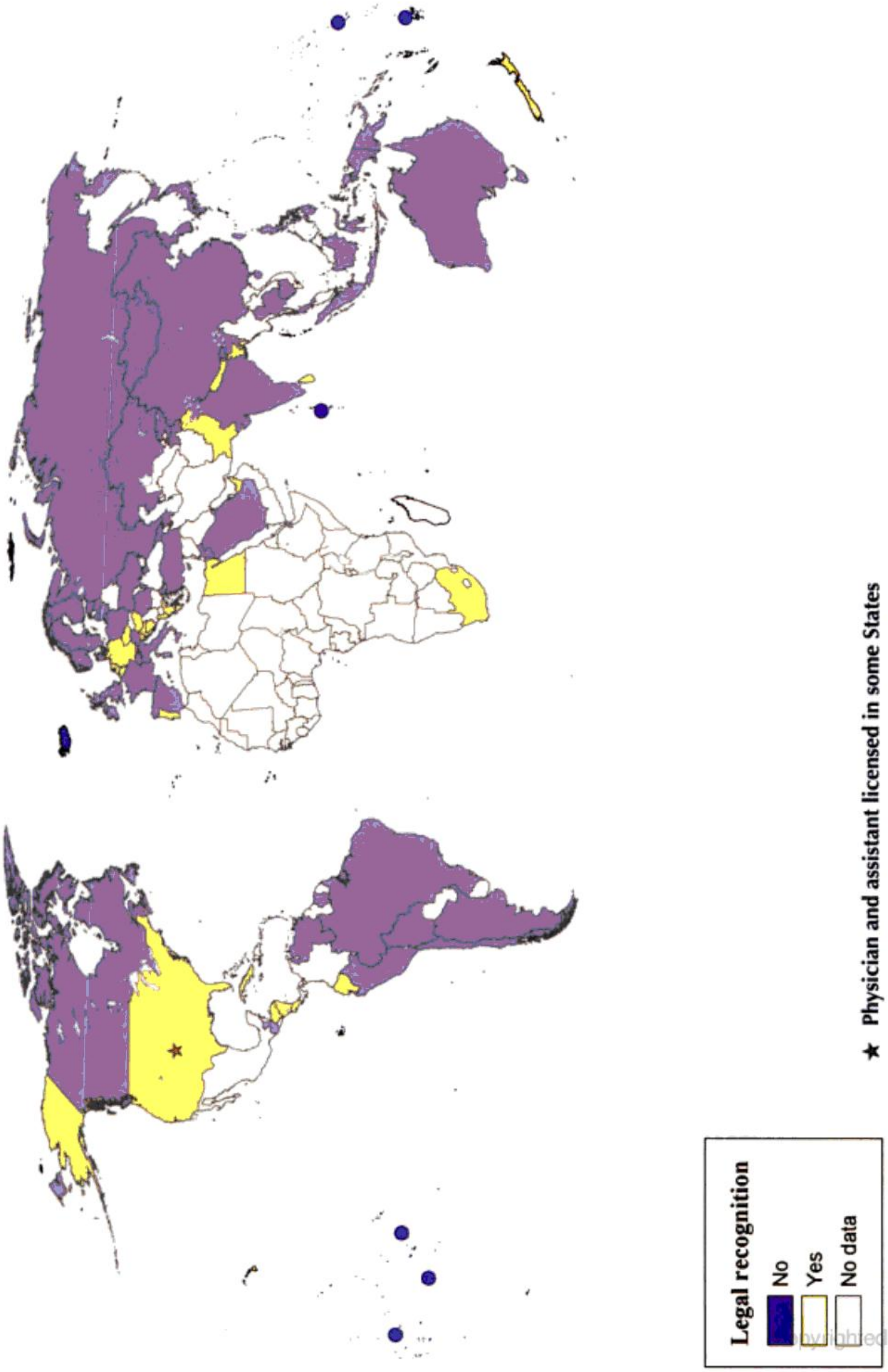


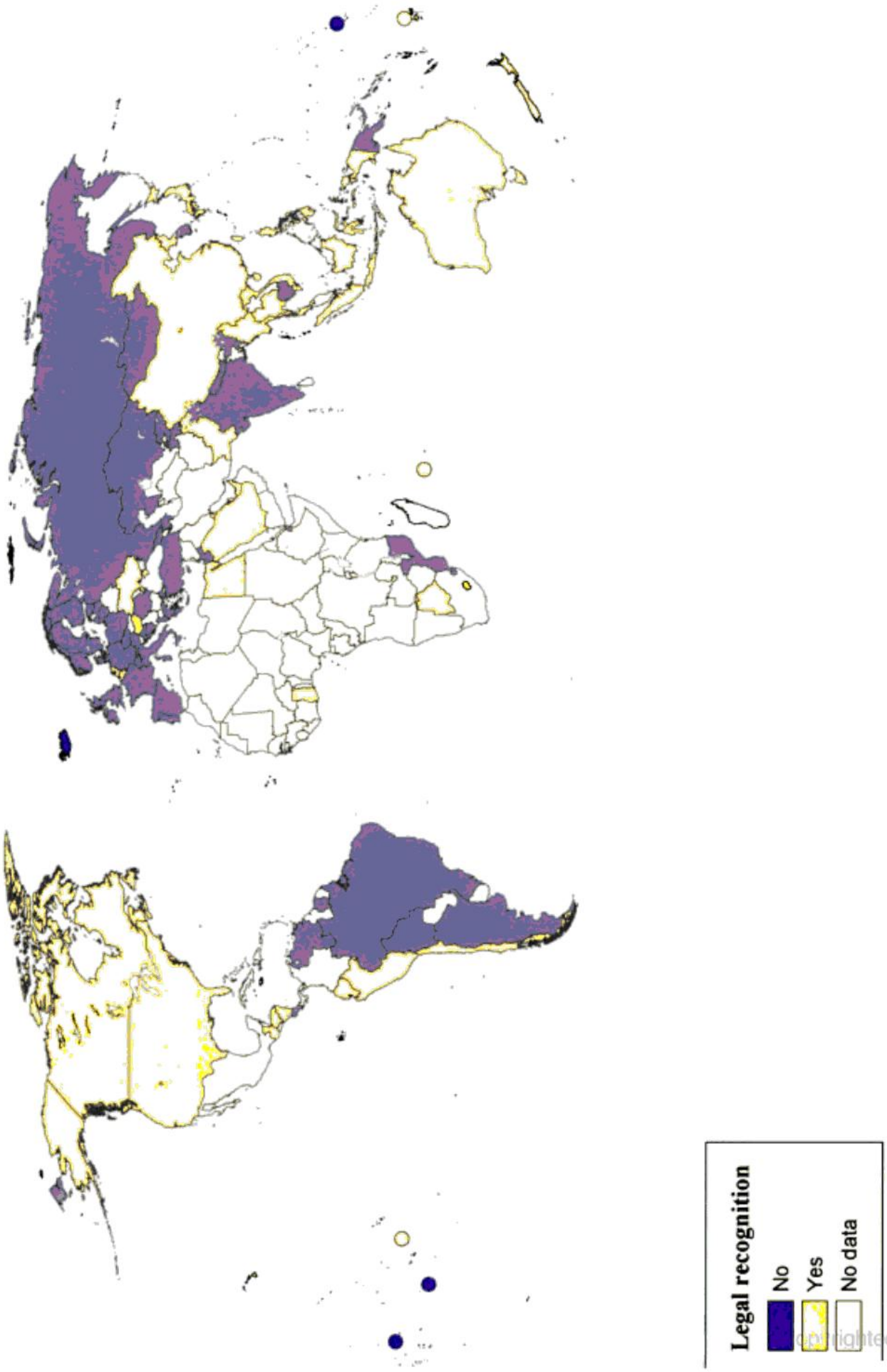




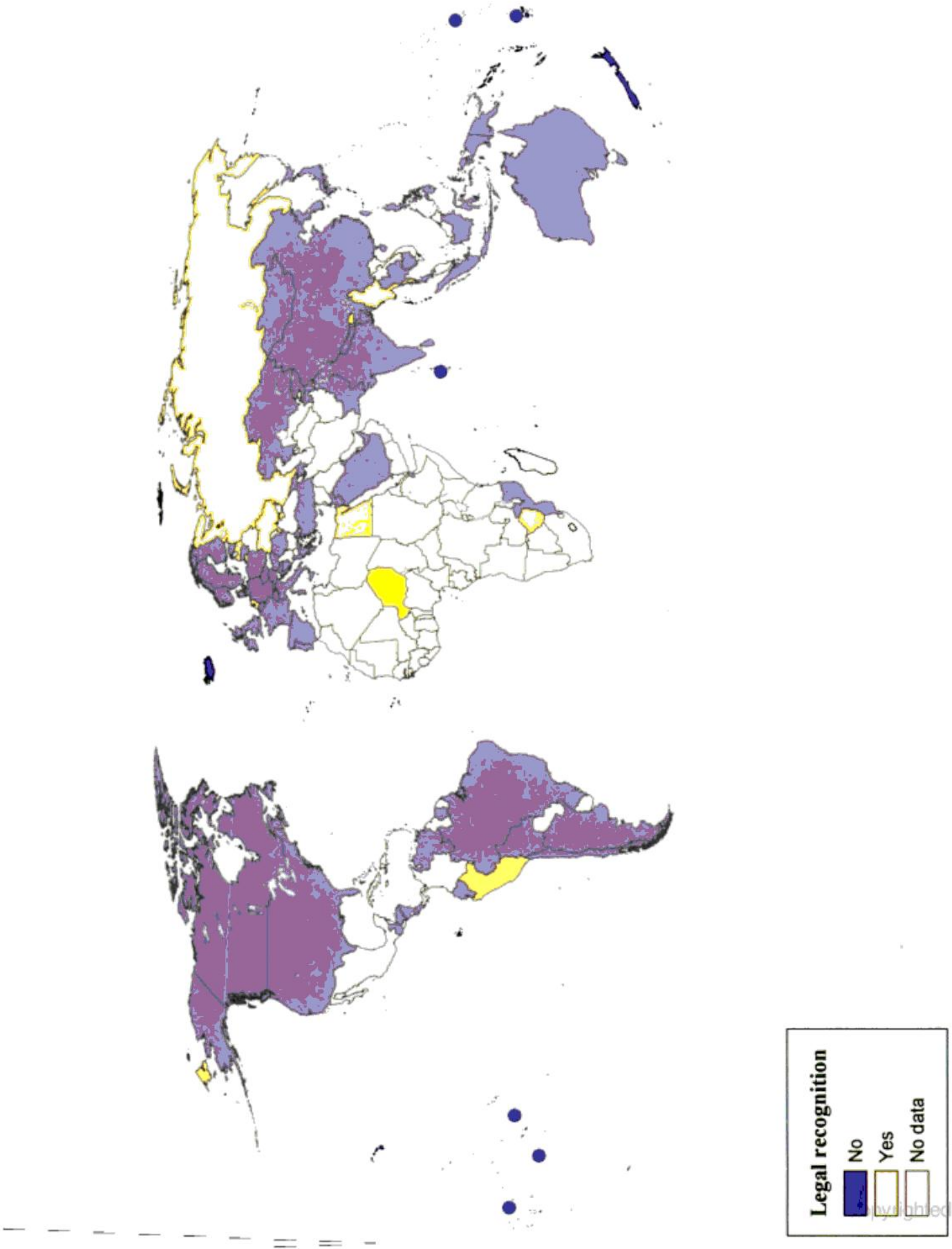






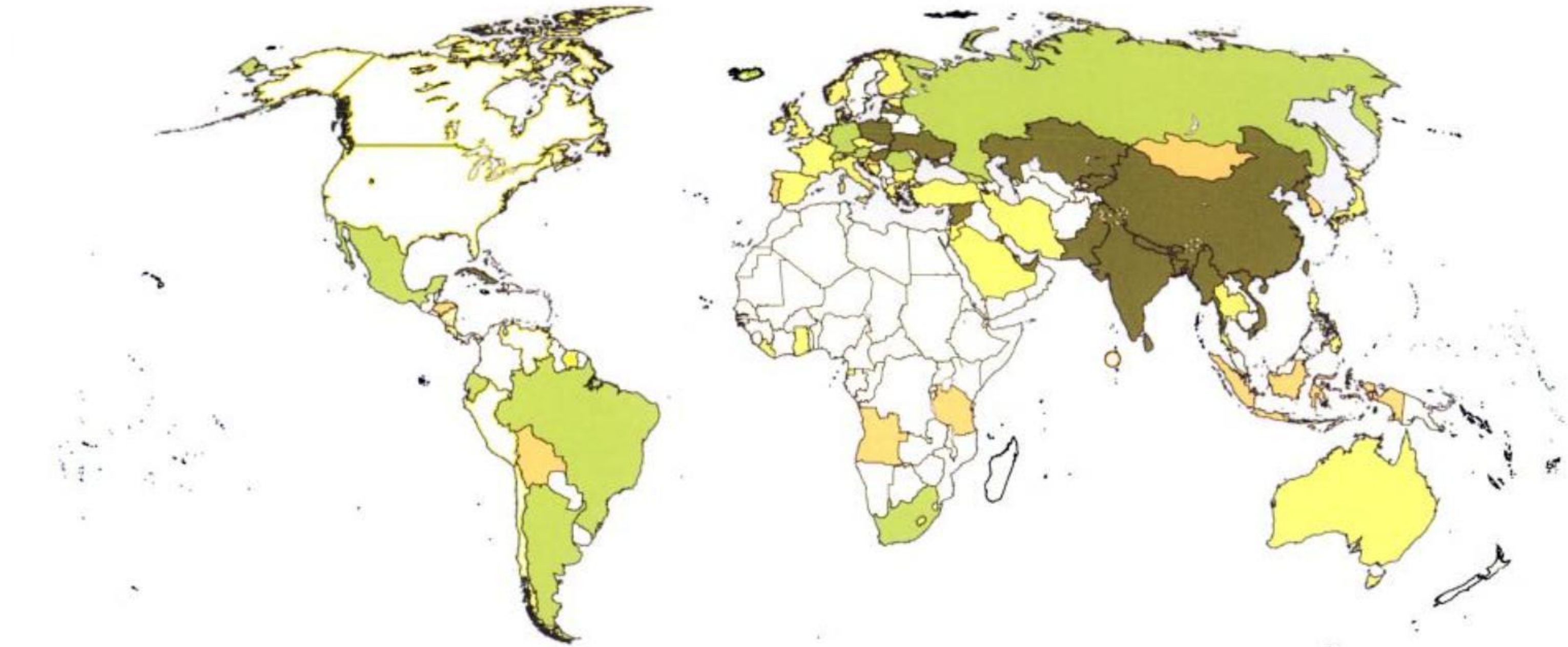


# B9. LEGAL RECOGNITION OF SPIRITUAL HEALERS AND PRACTITIONERS OF OTHER FAITH-BASED THERAPIES



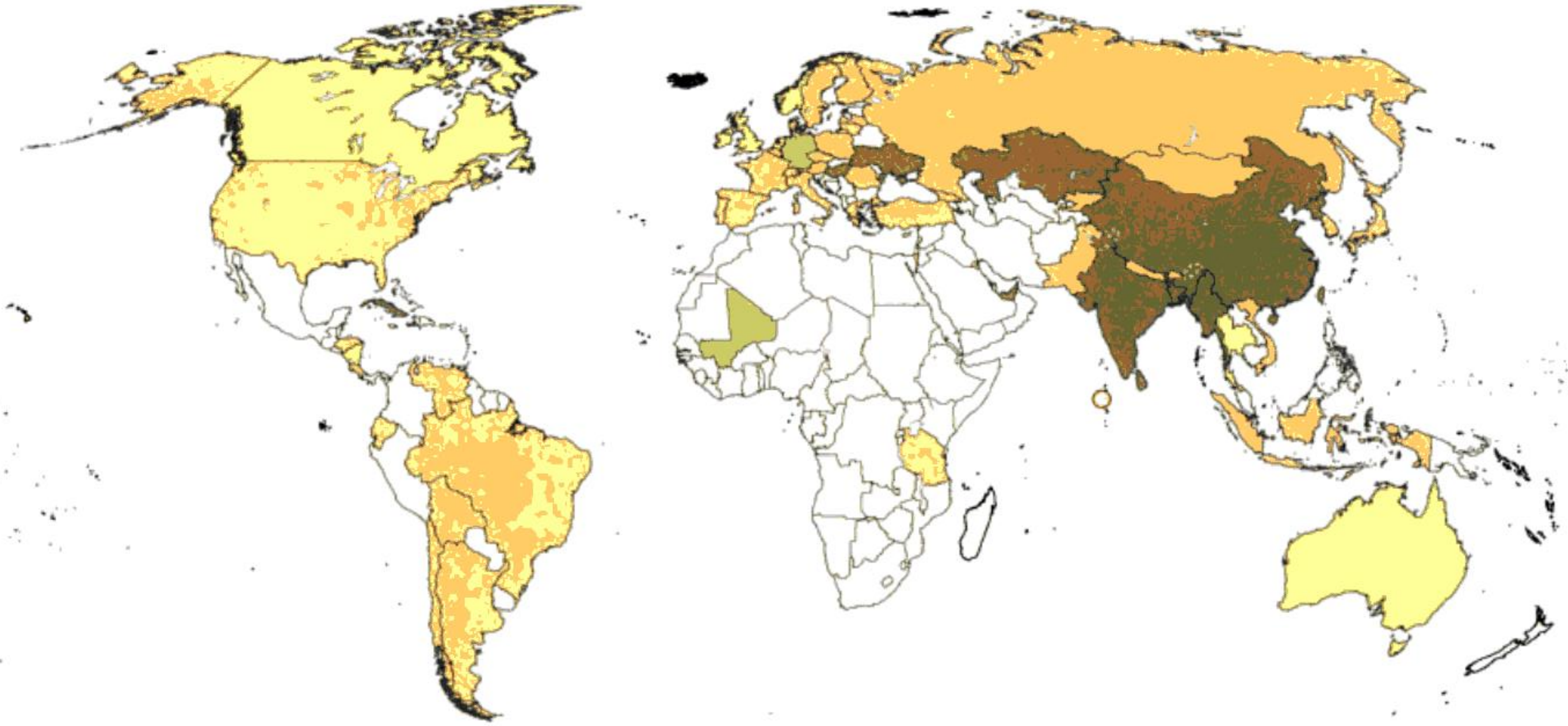
SECTION C.

# CONVENTIONAL PROFESSIONALLY-QUALIFIED HEALTH-CARE PRACTITIONERS ENTITLED TO PROVIDE TCAM



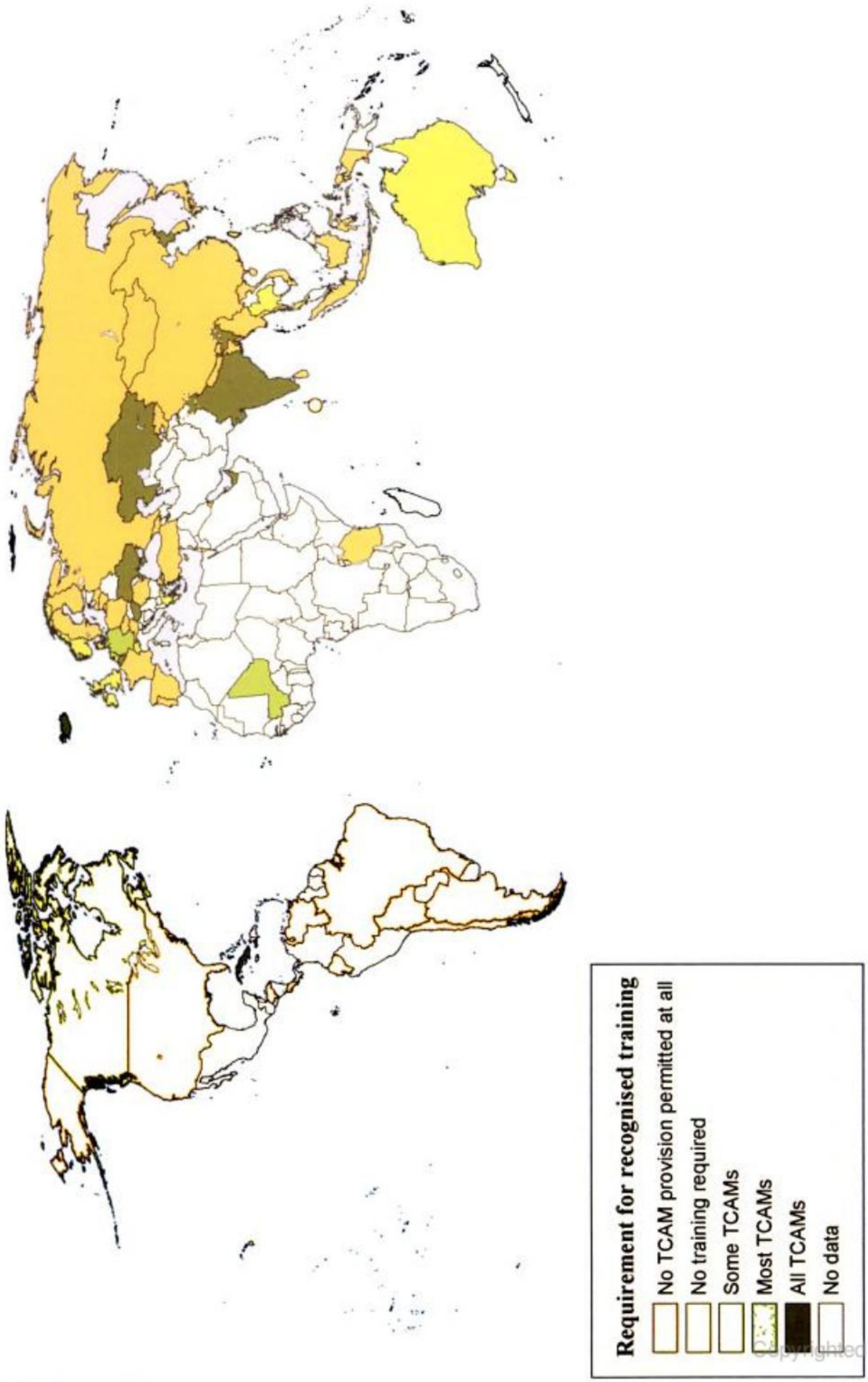
**Requirement for recognised training**

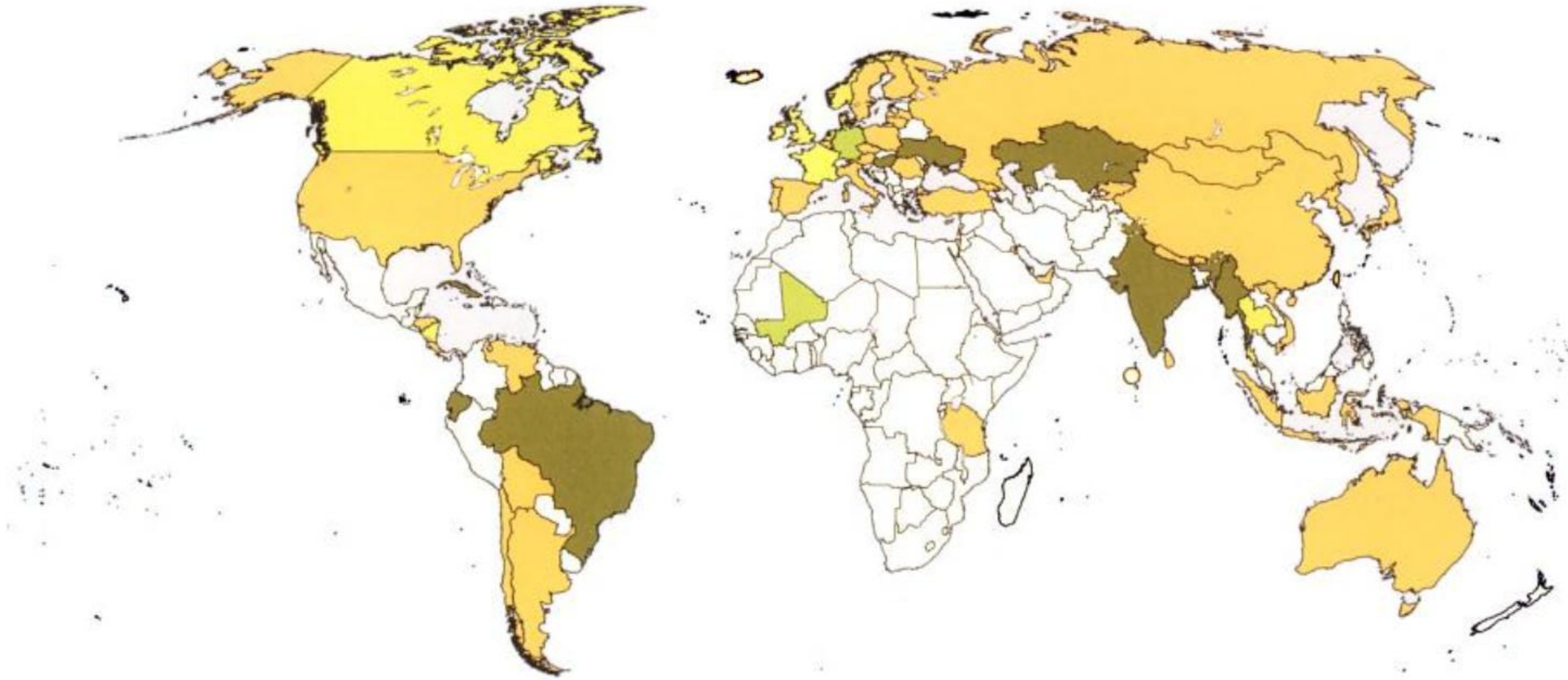
- No TCAM provision permitted at all
- No training required
- Some TCAMs
- Most TCAMs
- All TCAMs
- No data



**Requirement for recognised training**

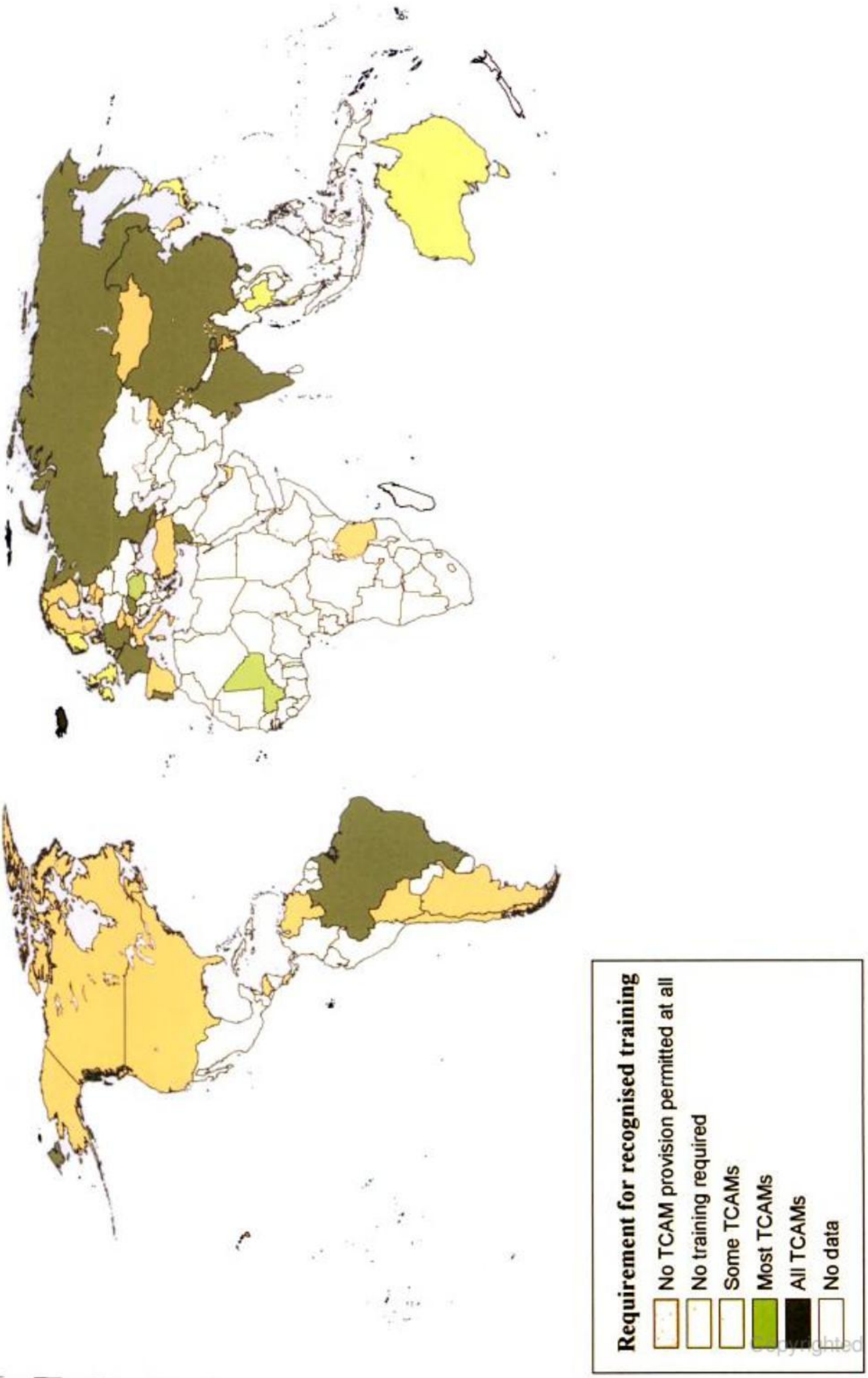
- No TCAM provision permitted at all
- No training required
- Some TCAMs
- Most TCAMs
- All TCAMs
- No data





**Requirement for recognised training**

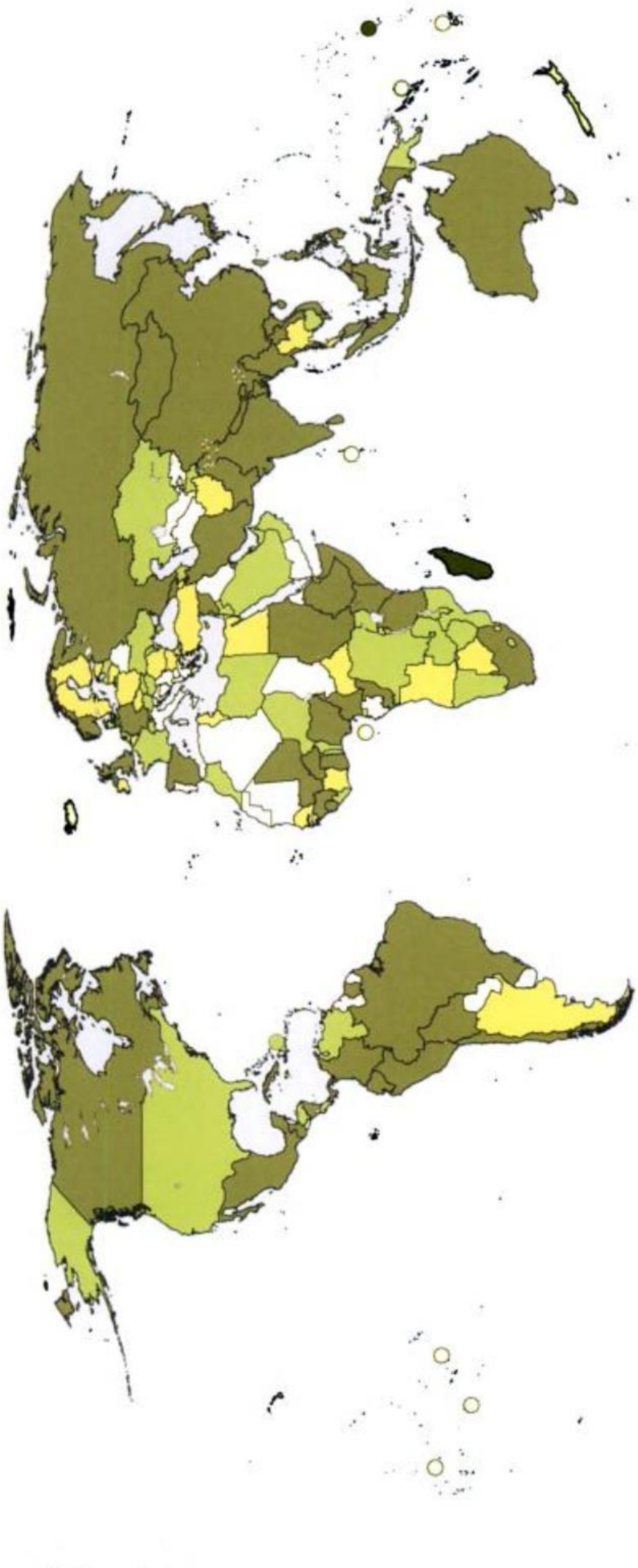
- No TCAM provision permitted at all
- No training required
- Some TCAMs
- Most TCAMs
- All TCAMs
- No data

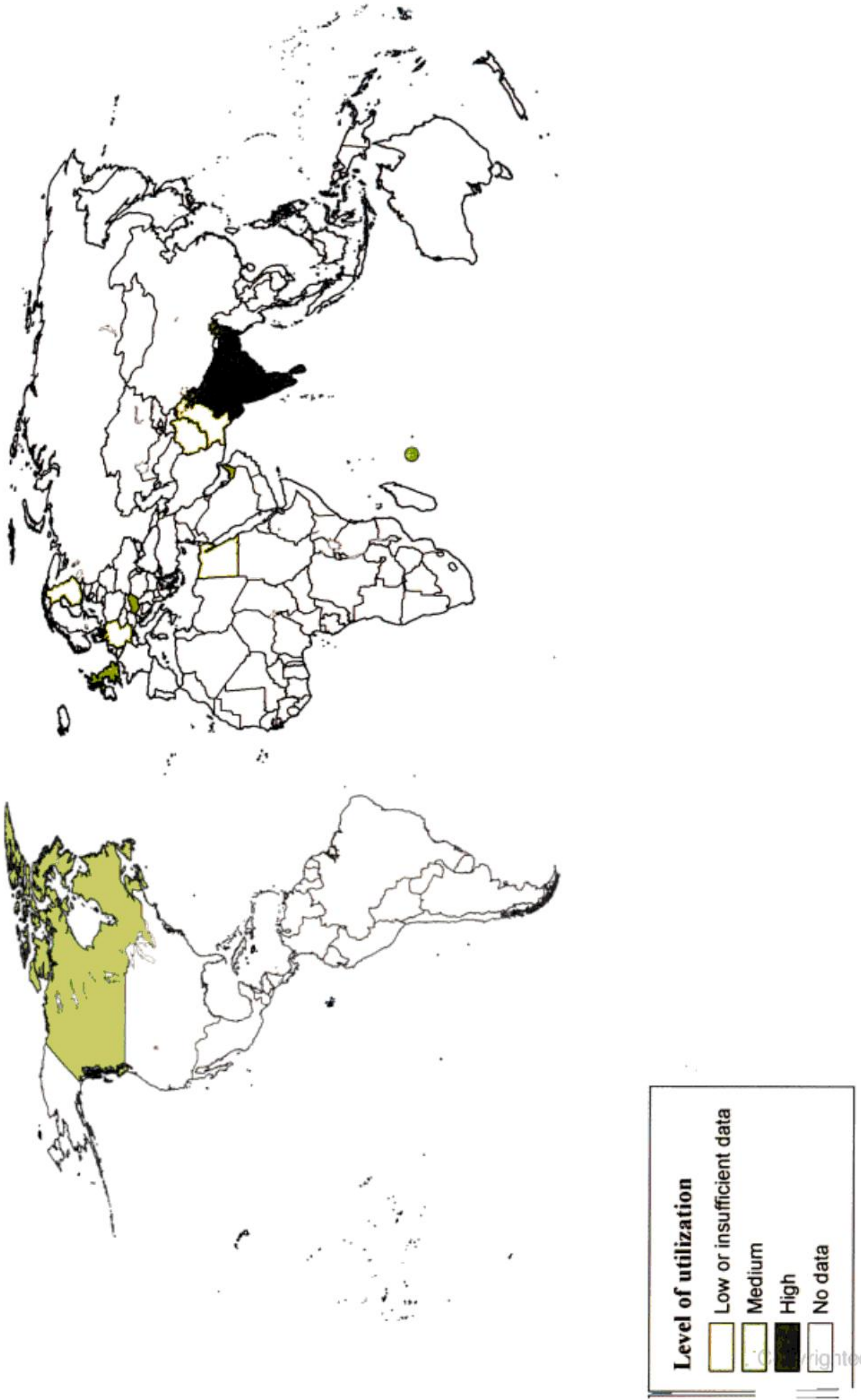


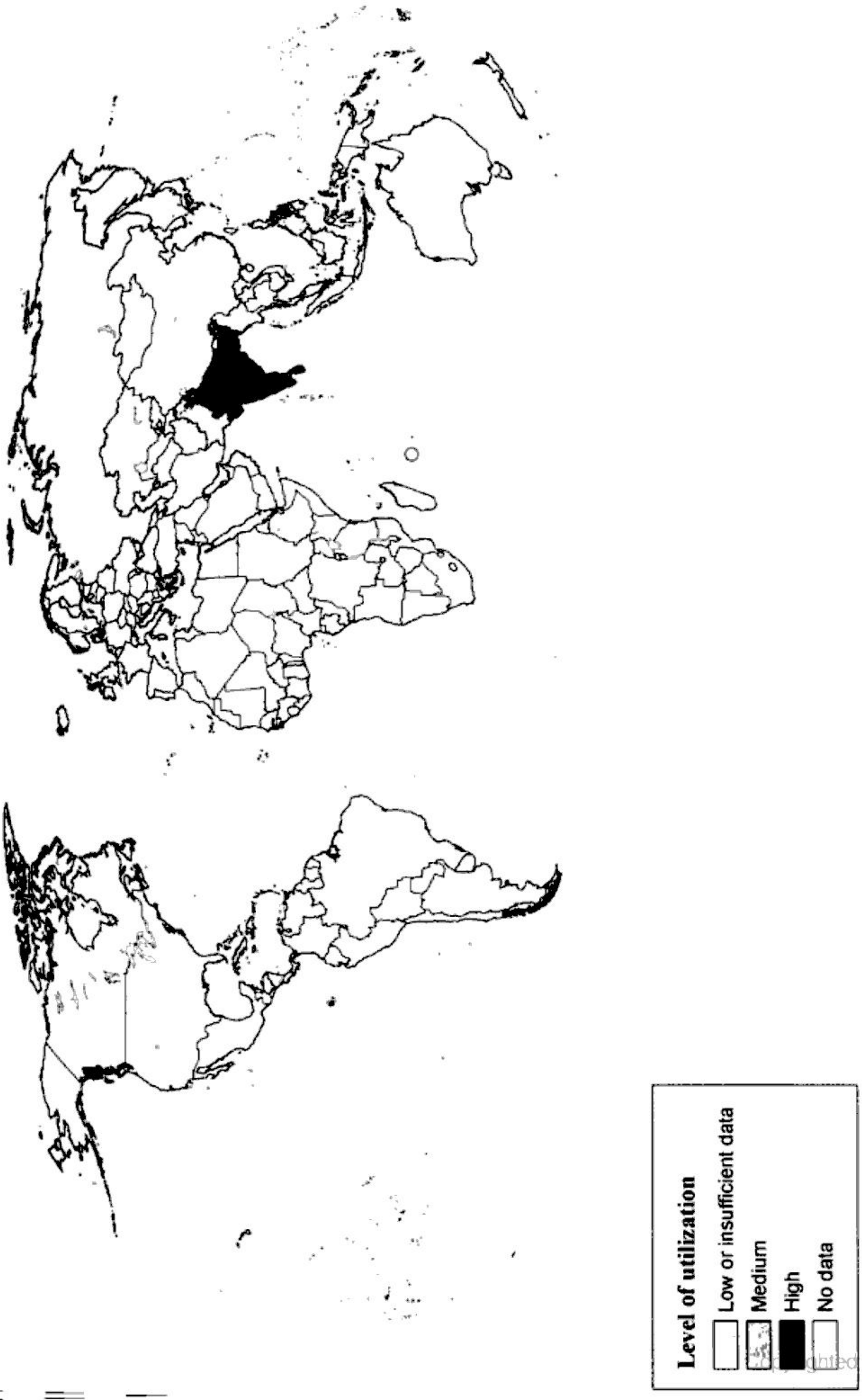
SECTION D.

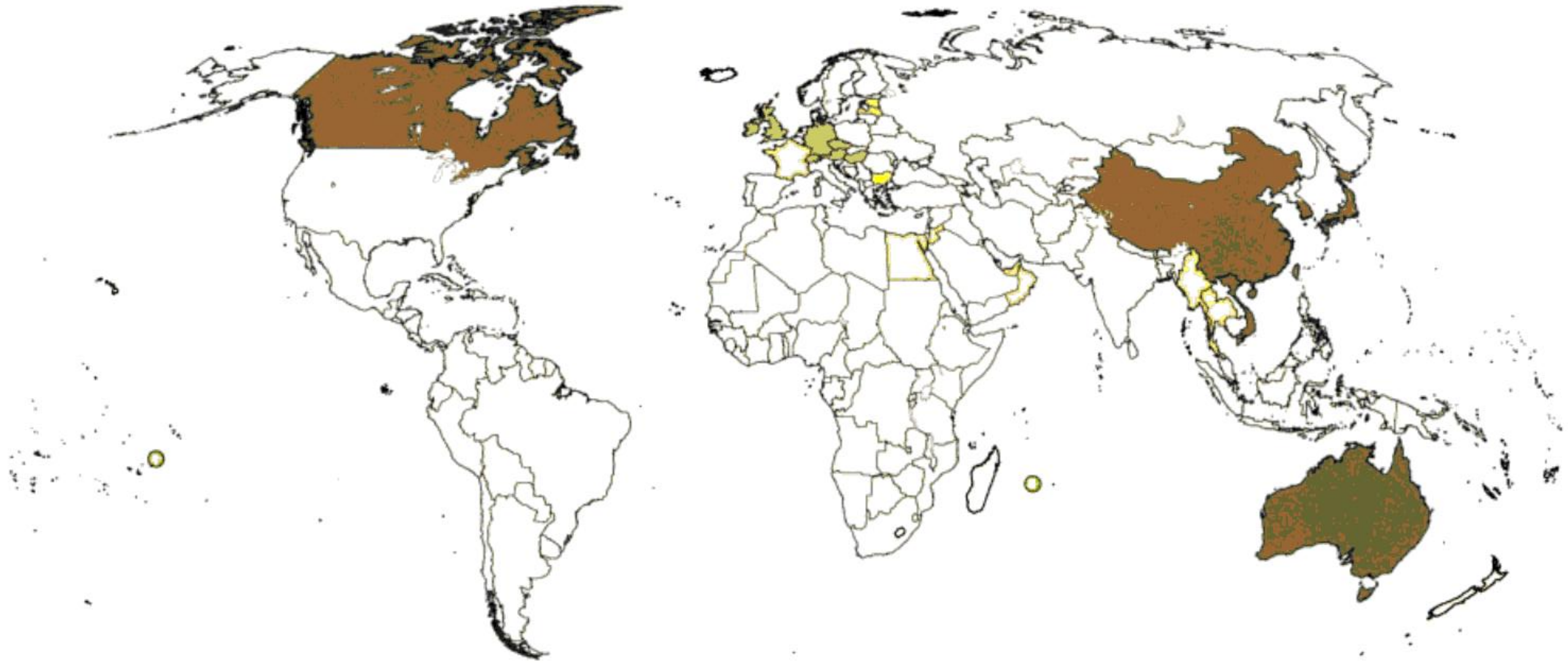
# PROCESS INDICATORS

# D1. UTILIZATION OF HERBAL/TRADITIONAL MEDICINE





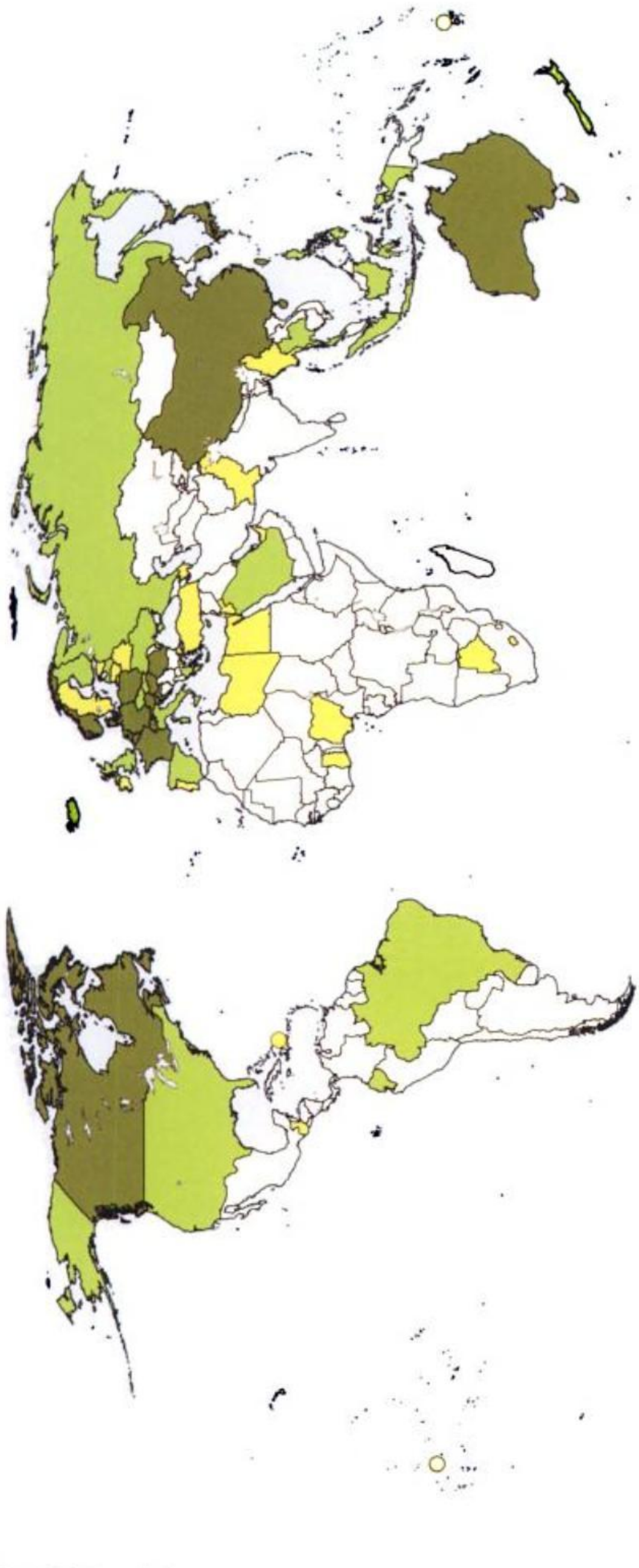


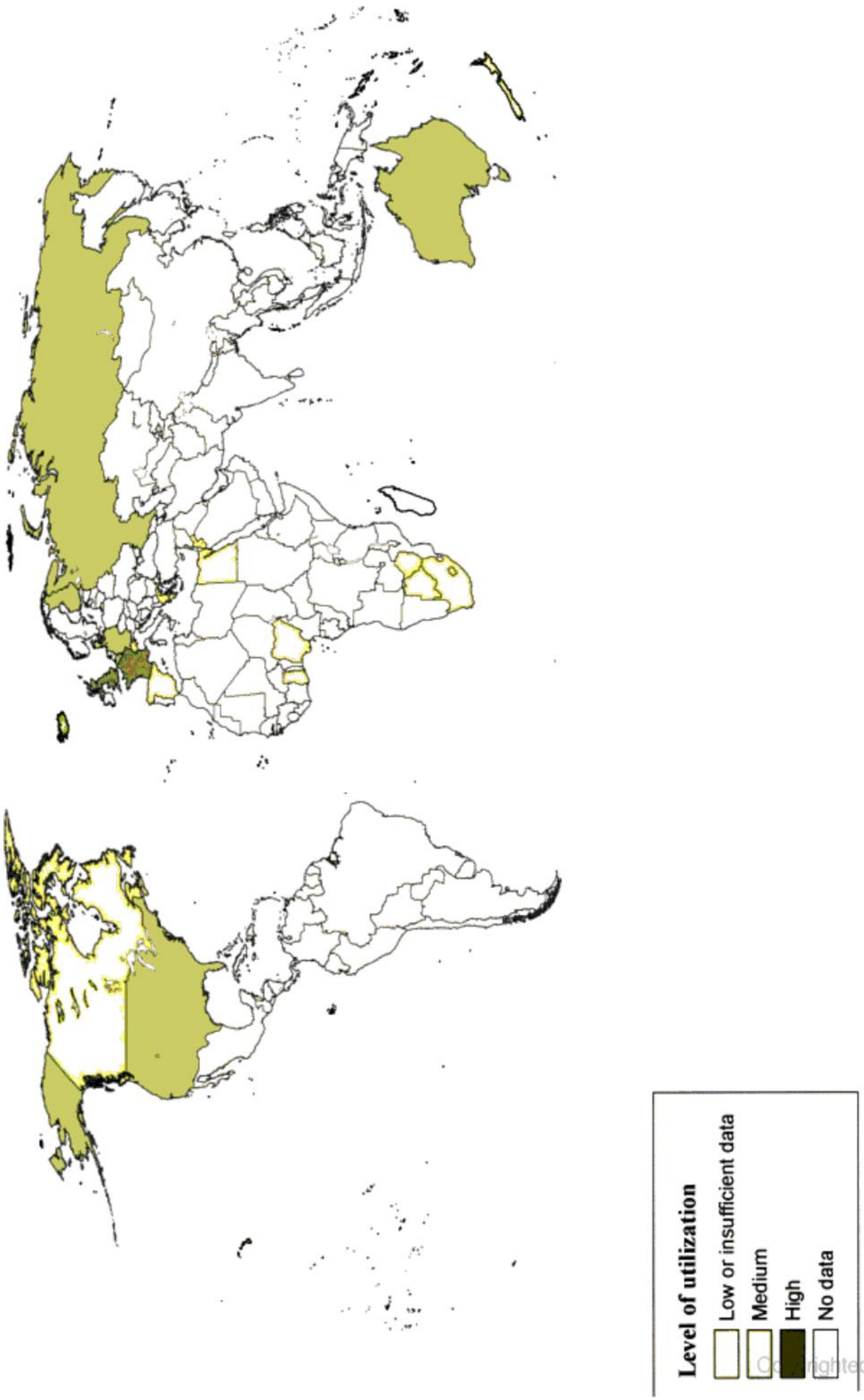


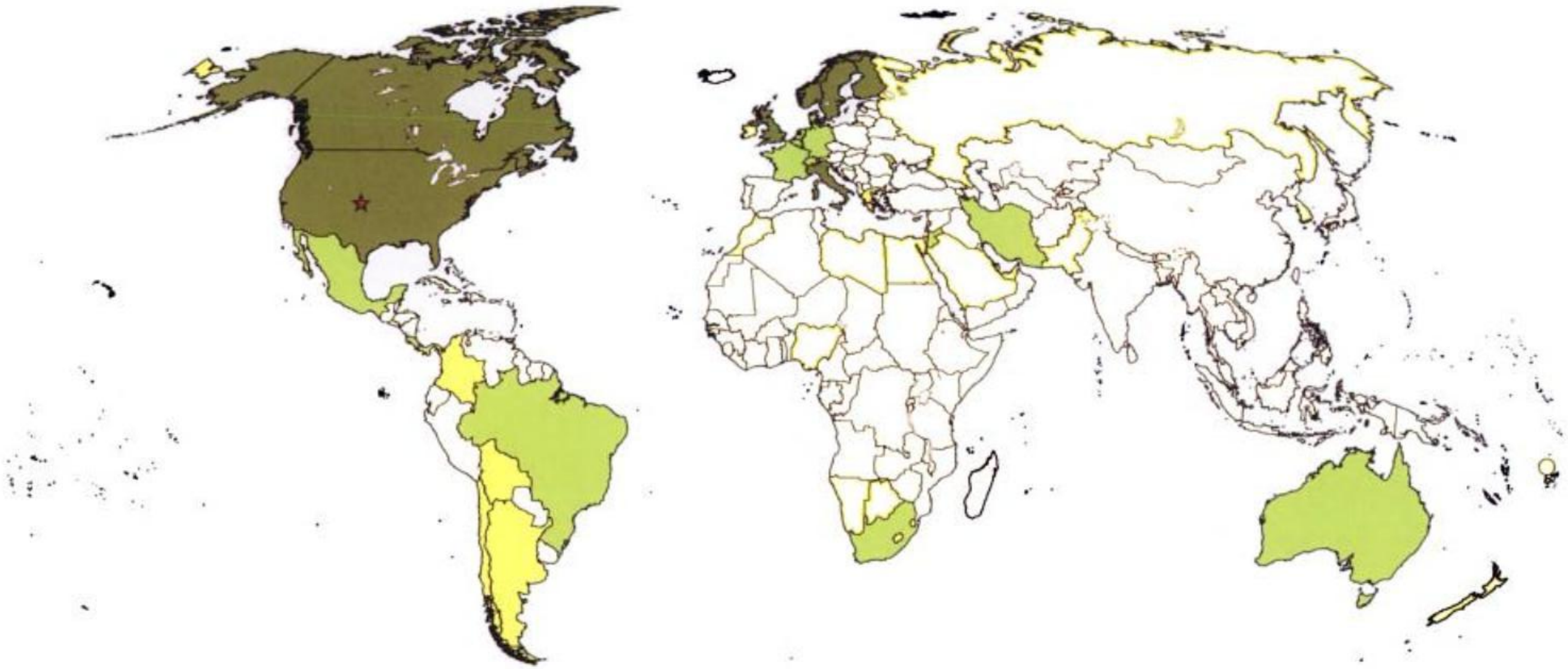
**Level of utilization**

- Low or insufficient data
- Medium
- High
- No data

# D5. UTILIZATION OF ACUPUNCTURE



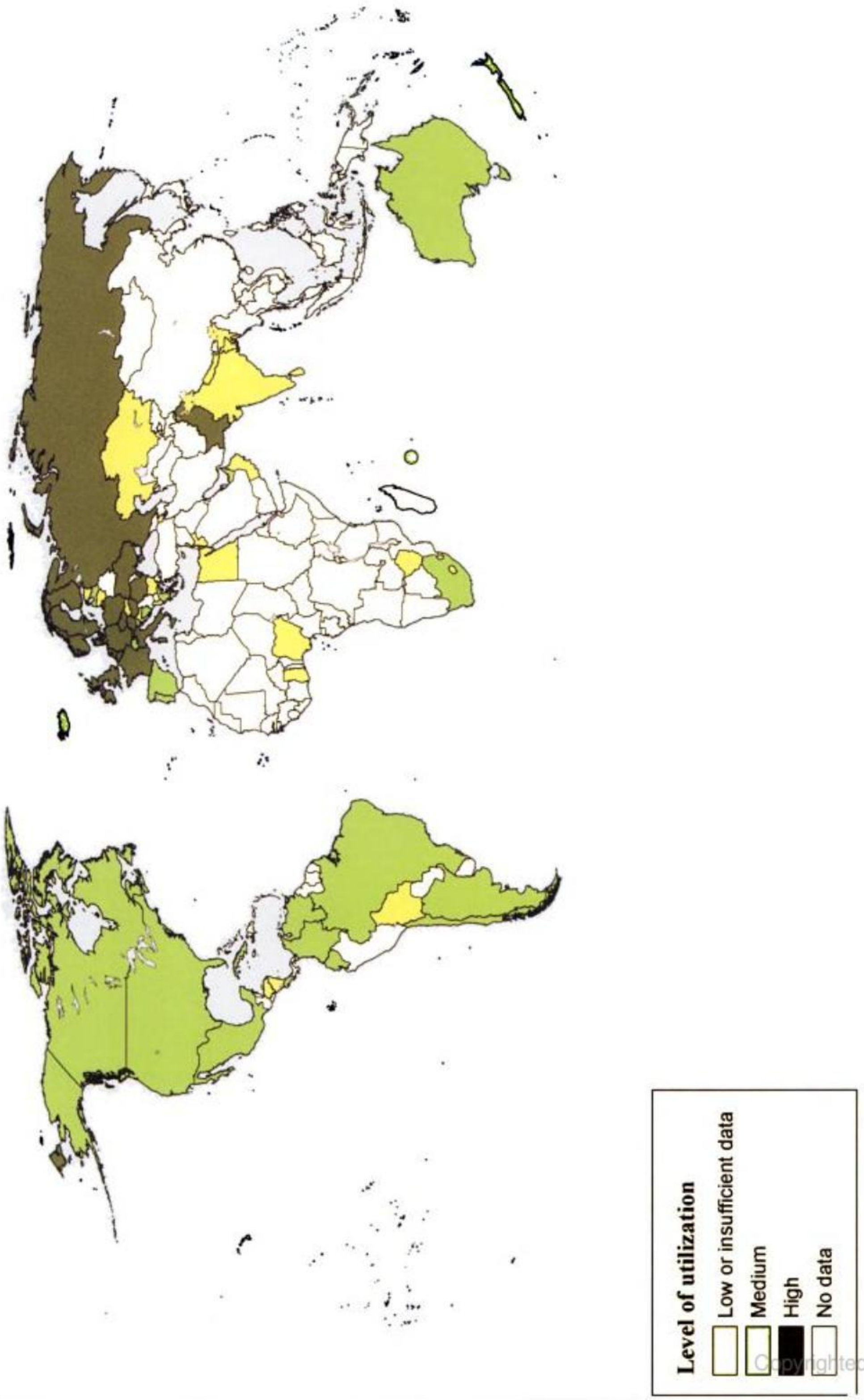


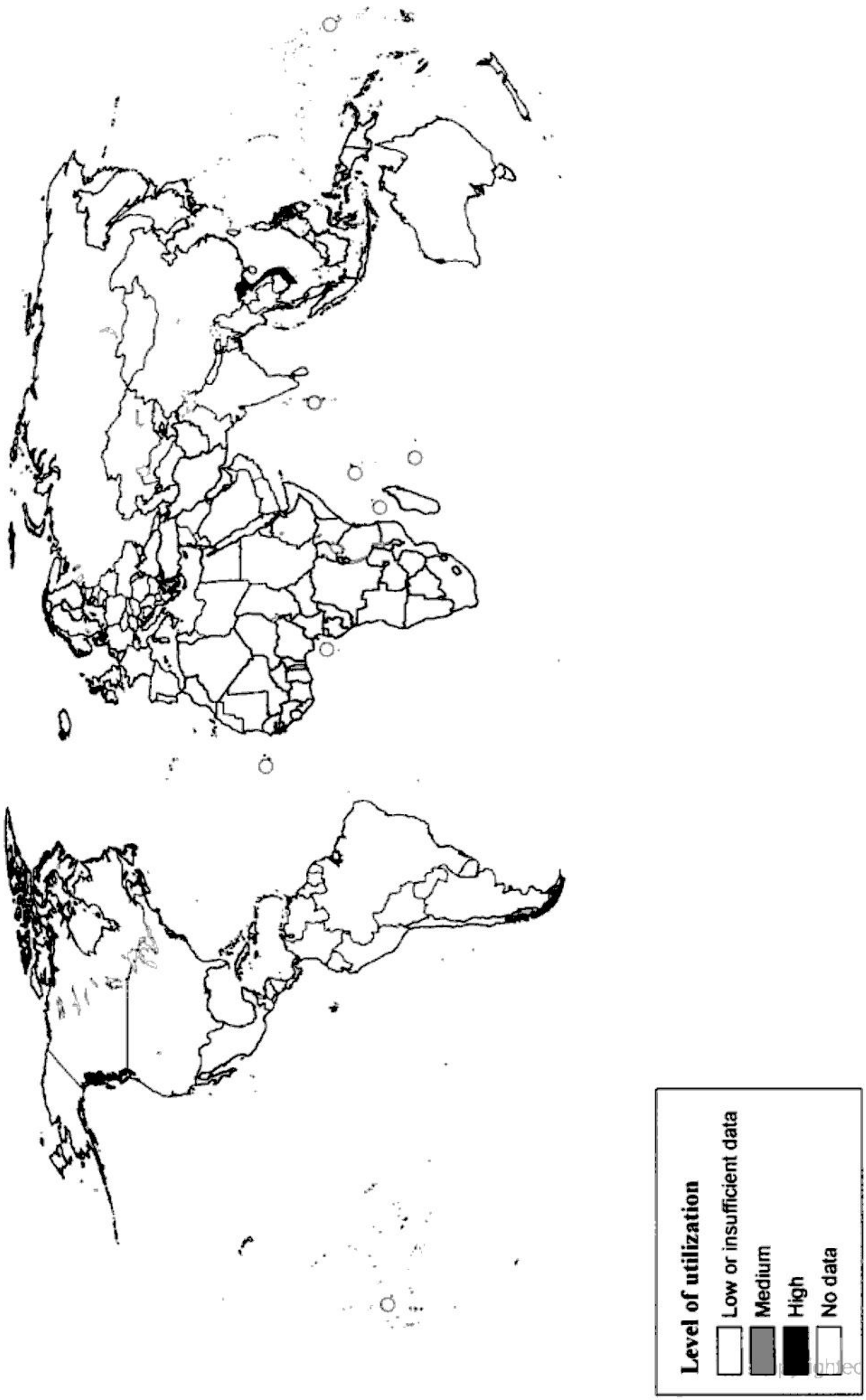


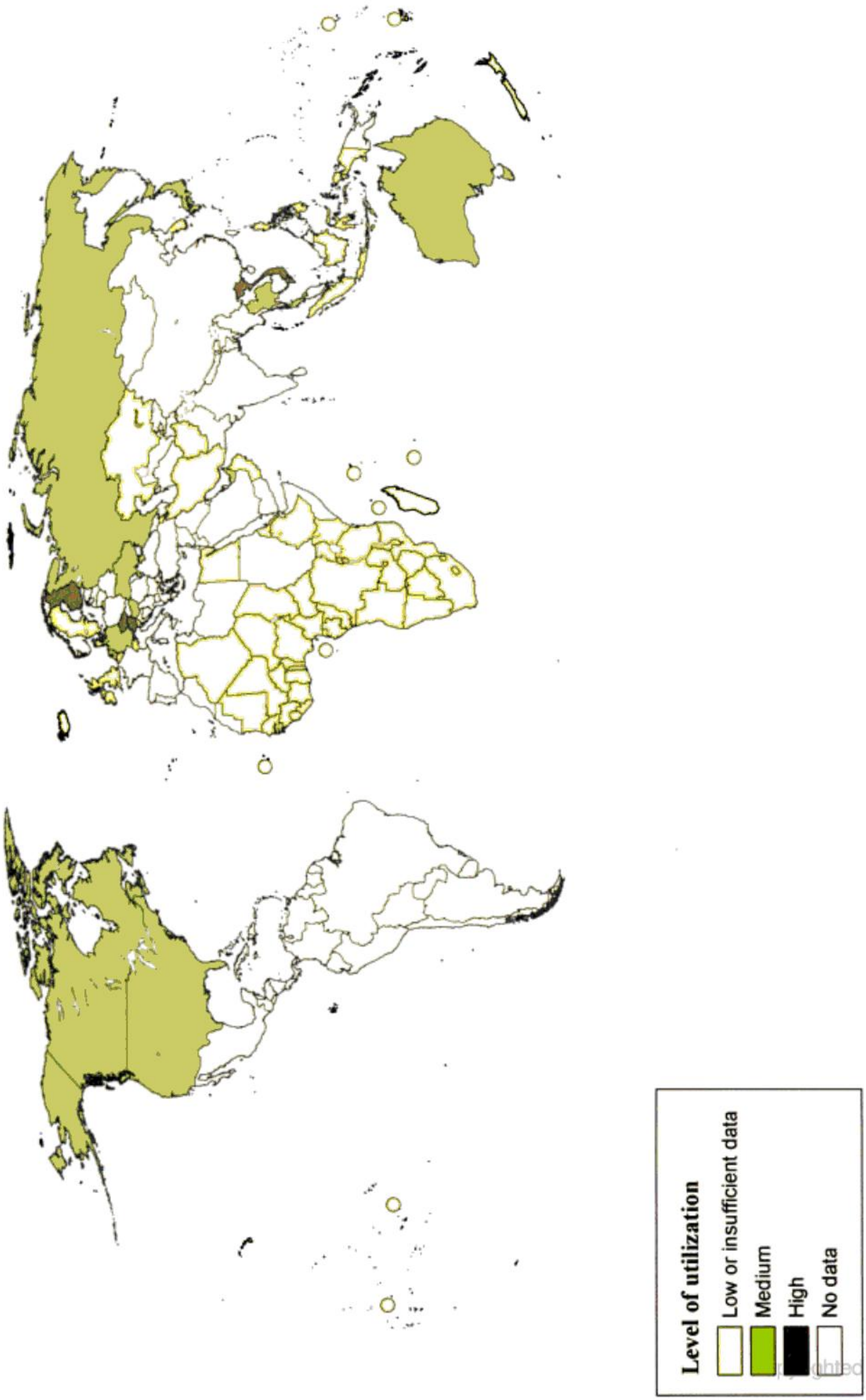
**Level of utilization**

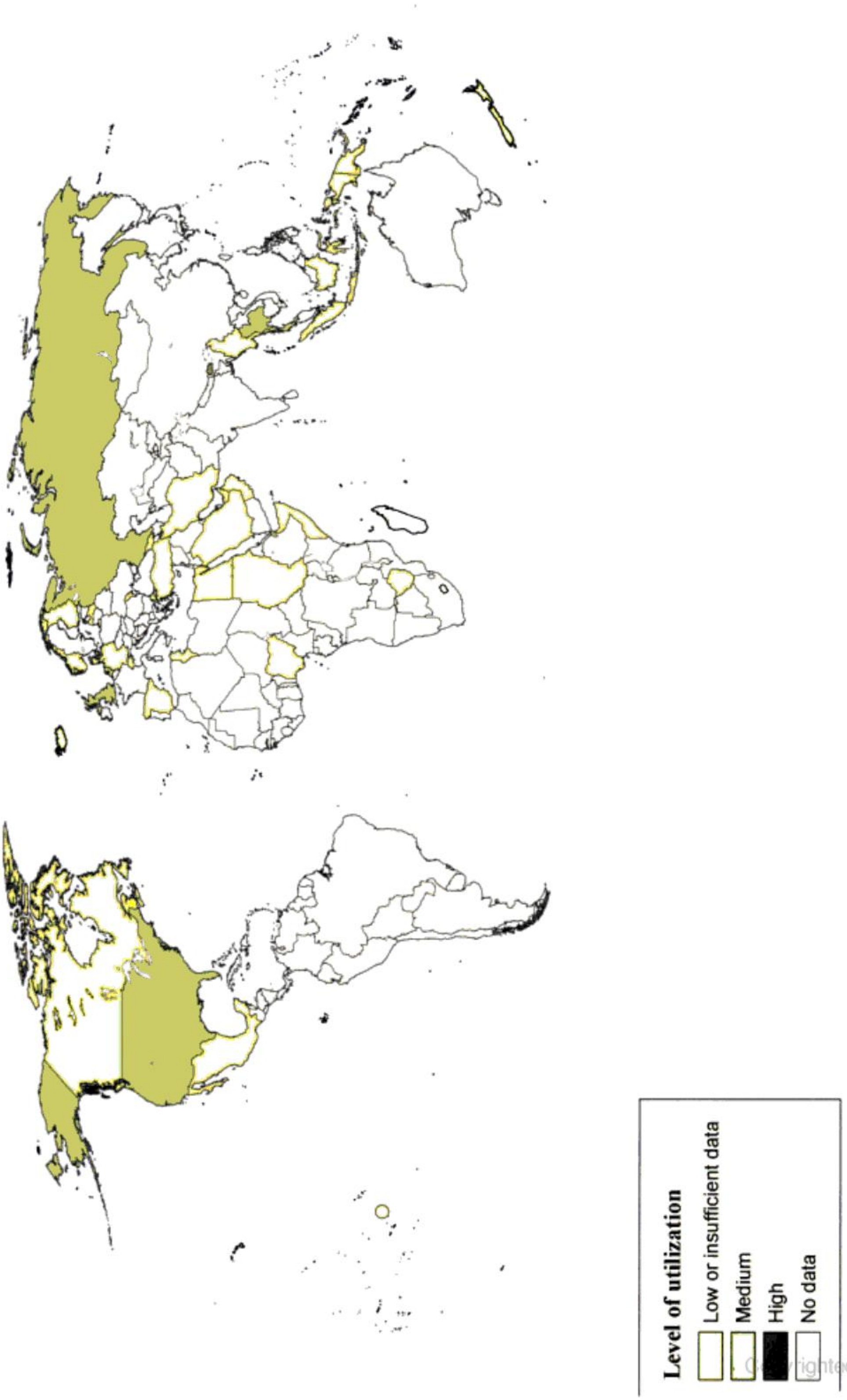
- Low or insufficient data
- Medium
- High
- No data

★ **Level varies by State**









SECTION E.

# STATISTICS AND TABLES

# E1. Associations between High and Low Gross Domestic Product and Selected Specific Therapies by Popularity using Weighted National Popularity Measure Scores

## CAPTION

These tables and charts show that a two-tier system of preference for TCAM exists globally. At the first level, certain forms of TCAM, namely traditional/herbal medicines and traditional Indian systems of medicine, are likely to be as popular in low-income nations as they are in high-income countries (defined, for the purposes of this Atlas, using a threshold gross domestic product value of 15 000 international dollars). At the second level, there are a large number of TCAM therapies that appear to be more popular in high-income countries than low-income ones. These therapies are: acupuncture, homeopathy, osteopathy, chiropractic, massage, aromatherapy and spiritual healing.

This analysis suggests that at some stage in a TCAM therapy's development, it becomes the preferred medicine of those who are economically better-off. It would appear that greater economic development may allow for health, lifestyle and value changes in higher-income countries, or groups within countries. These changes may also permit any possible dissatisfaction with conventional medical treatments to be voiced. The issues that are driving interest in TCAM in higher-income countries, as seen from a number of recent studies, are that TCAM is considered to be more integrated or holistic than conventional medicine, is regarded as more congruent with a 'green' lifestyle, and is generally perceived as offering more satisfactory practitioner-patient interaction and care.

The Global Atlas data show that TCAM is at a point of transition, as higher-income countries develop greater health and economic interest in TCAM. The data were analysed to determine the point of "switch", where TCAM ceases to be only a medicine for the poor and comes into demand as medicine for the better-off. We believe that we are at a point where the commonly-popular complementary and alternative medicines within industrialized countries (such as homeopathy, osteopathy and chiropractic) have already completed the transition to preferred medicines of the rich.

What is perhaps more alarming is that market forces are driving certain traditional forms of health care towards the richer markets. This does not appear to have influenced the popularity of most herbal/traditional medicines, nor the Indian systems of medicine, which retain their affordability and popularity among low- and high-income countries. However, traditional Chinese medicine is clearly preferred by the wealthier nations globally. We speculate that this may have something to do with the spinning-off of acupuncture as a separate and valid profession, which has raised interest and investment in other areas of traditional Chinese medicine.

Further editions of the Atlas should monitor this trend since it is possible that a continuation will result in neither allopathic medicine nor TCAM being affordable for populations within lower-income countries. In addition, TCAM resources could become stripped to service the demands of the market in the higher-income countries.

**Figure E.1.1.** Popularity, as measured by Weighted National Popularity Measure (WNPM) scores, of acupuncture, homeopathy and chiropractic compared with herbal/ traditional medicines, calculated for low-income countries (gross domestic product (GDP) < Int$ 15 000) and high-income countries (GDP > Int$ 15 000).

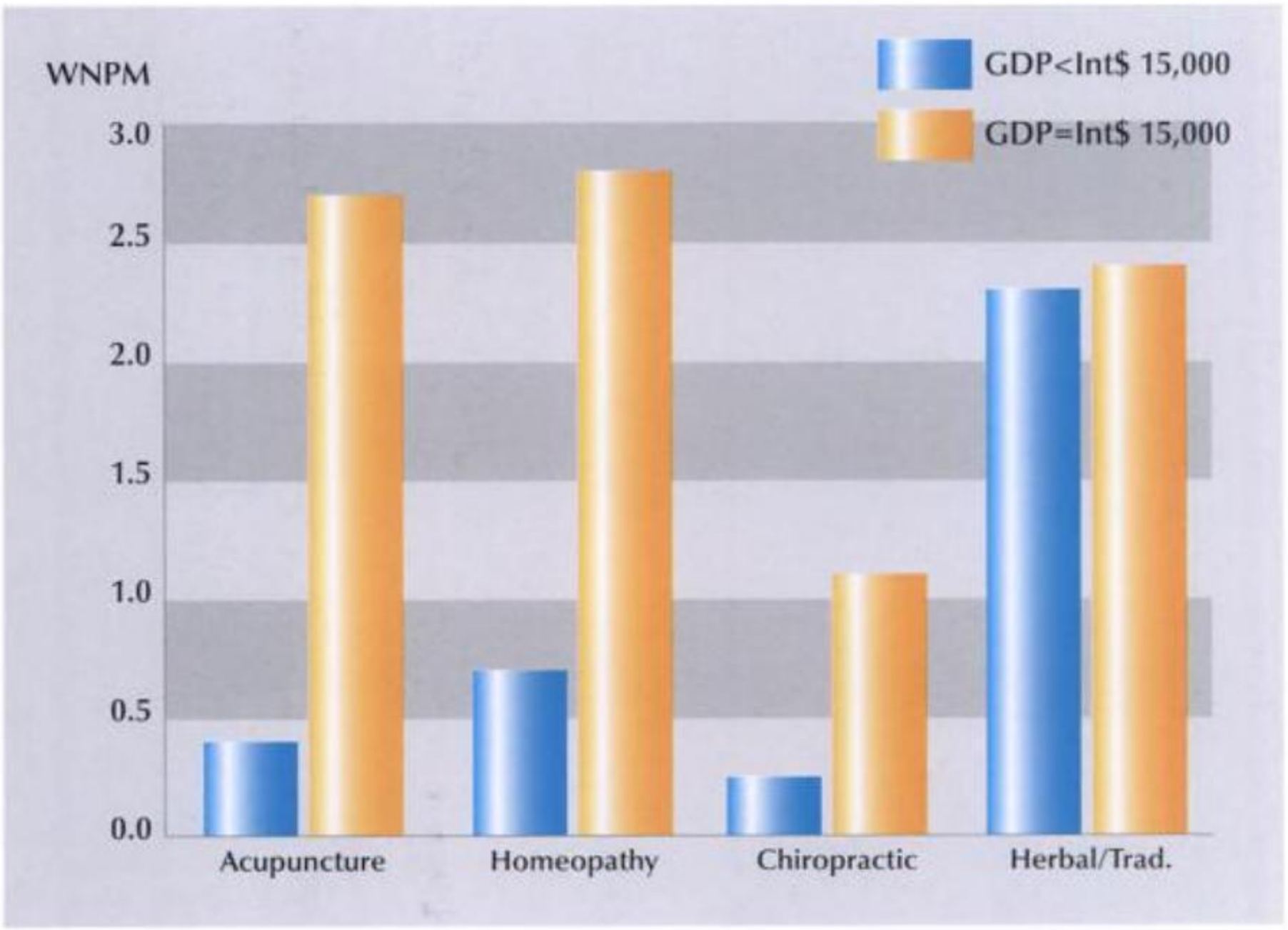



**Figure E.1.2.** Popularity, as measured by Weighted National Popularity Measure (WNPM) scores, of major internationally-established traditional systems of medicine, namely Indian systems of medicine(ISM), traditional Chinese medicine(TCM) and all other forms of traditional/herbal medicines, calculated for low-income countries (GDP < Int$ 15 000) and high-income countries (GDP > Int$ 15 000).

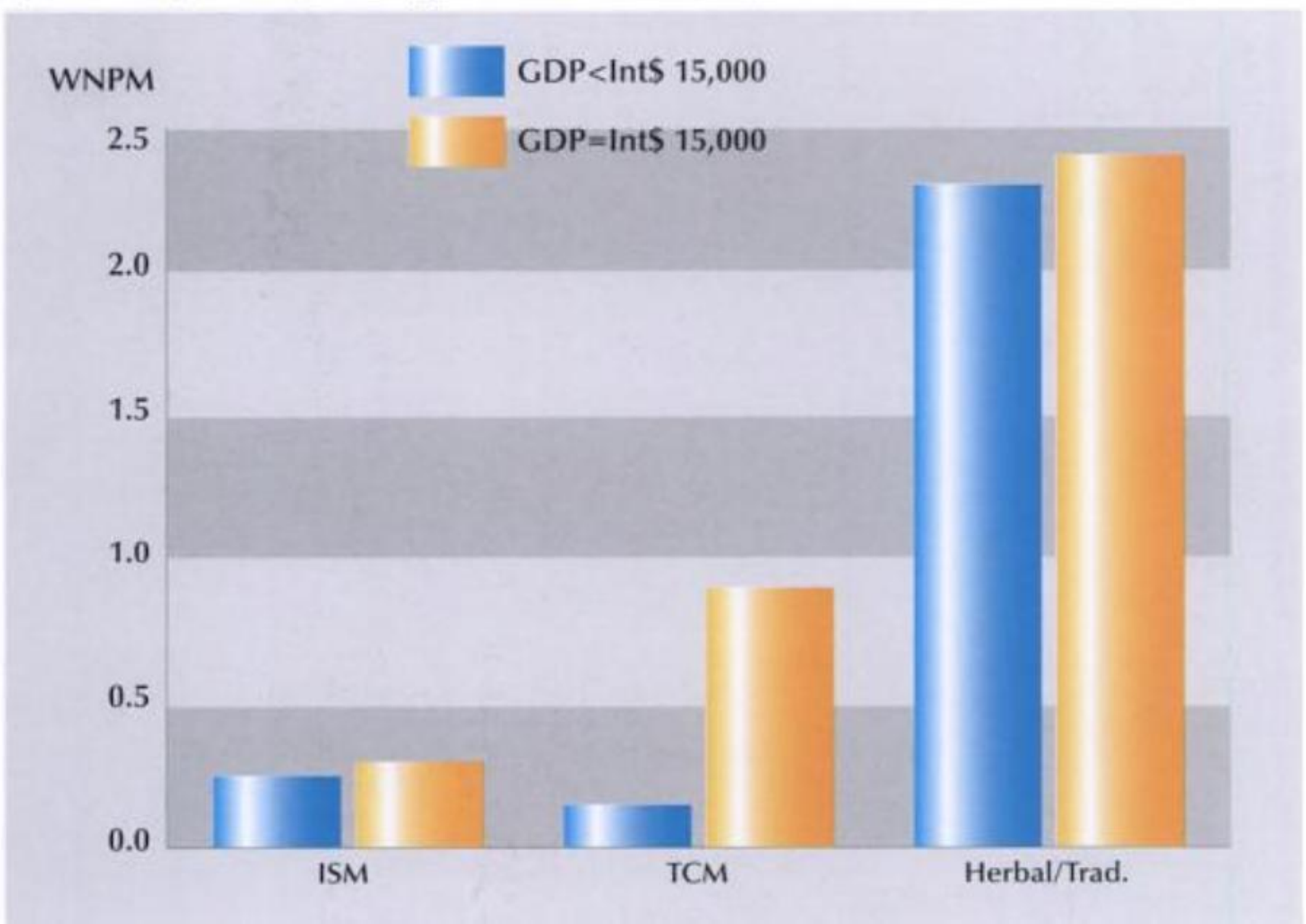


**Figure E.1.3.** Popularity, as measured by Weighted National Popularity Measure (WNPM) scores, of manipulative therapies and spa therapies, calculated for low-income countries (GDP < Int$ 15 000) and high-income countries (GDP > Int$ 15 000)

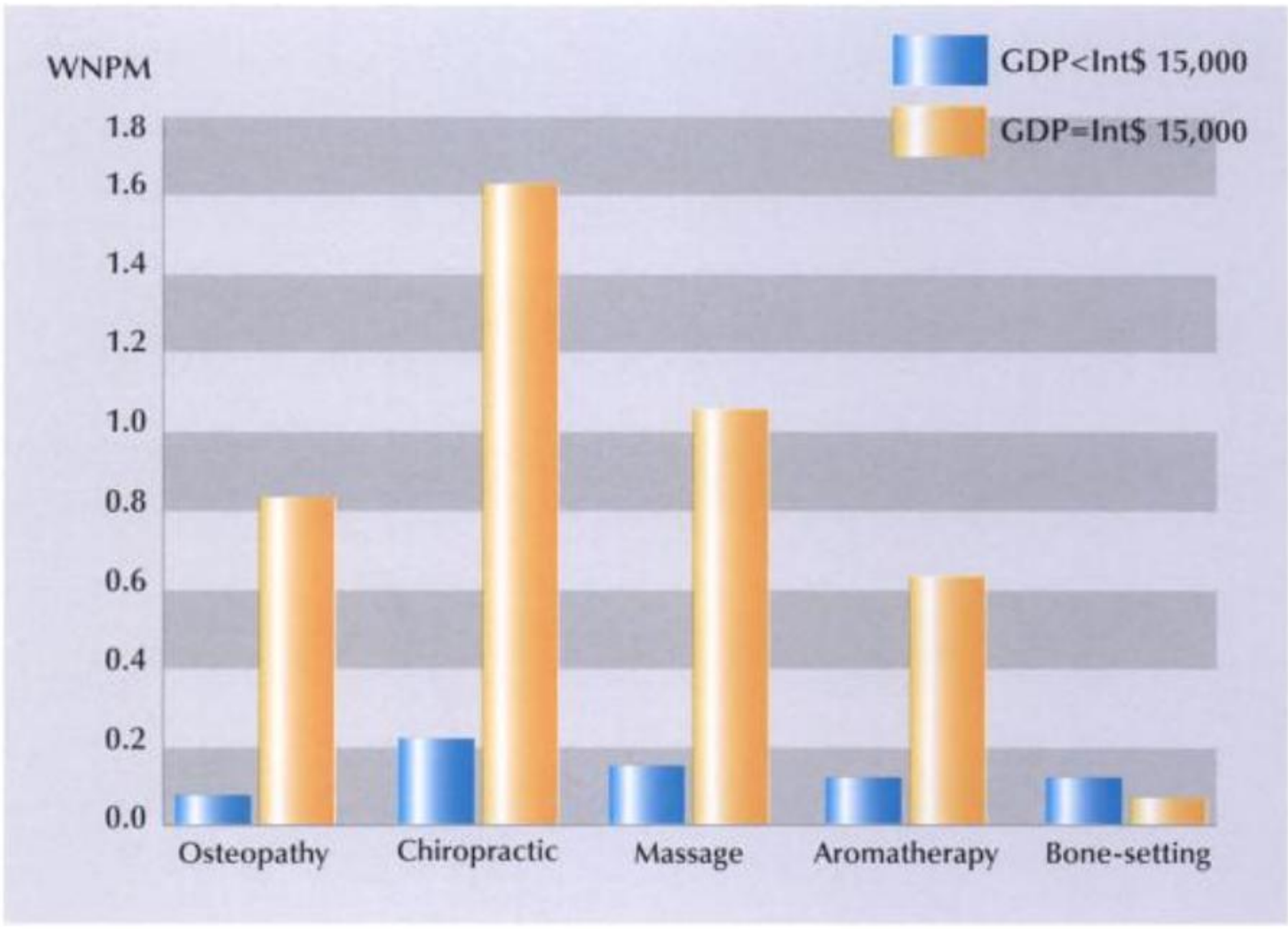


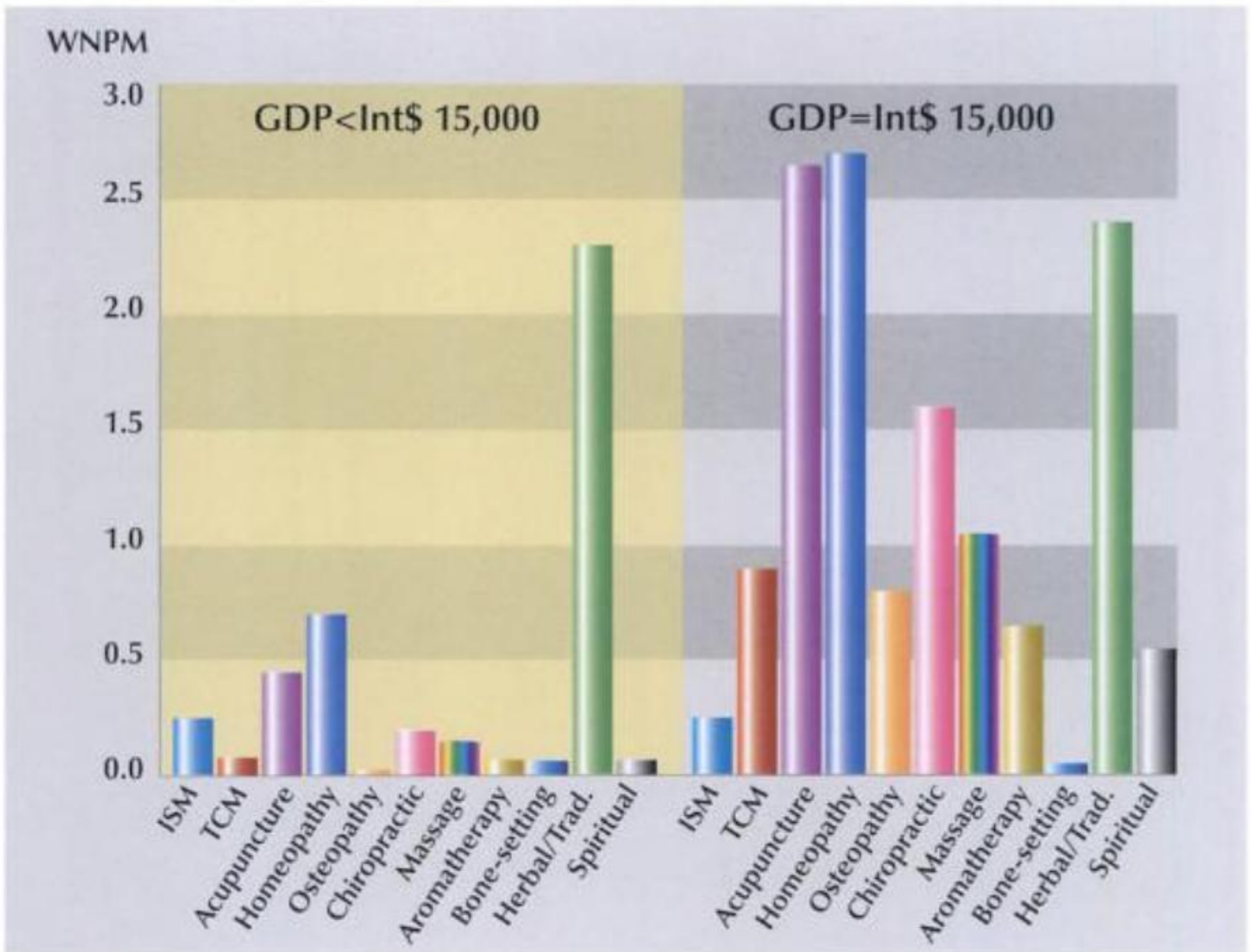

**Table E.1.1.** Student's two-tailed *t*-test *P*-values for comparisons of popularity in low-income countries (GDP < Int$ 15 000) and high-income countries (GDP ≥ Int$ 15 000), for 10 groupings of TCAM

| Therapy grouping[a] | P-value | Significance |
|---|---|---|
| Indian systems of medicine (Ayurveda, Unani, Siddha, Yoga) | 0.44 | NS[b] |
| Traditional Chinese medicine | 0.00005 | $P < 0.05$ |
| Acupuncture | 0.000000001 | $P < 0.05$ |
| Homeopathy, including anthroposophic medicine | 0.00000001 | $P < 0.05$ |
| Osteopathy | 0.0001 | $P < 0.05$ |
| Chiropractic | 0.00000004 | $P < 0.05$ |
| Massage and other manipulative therapies | 0.00003 | $P < 0.05$ |
| Aromatherapy, reflexology and related therapies | 0.0002 | $P < 0.05$ |
| Herbal medicine and traditional medicine | 0.61 | NS[b] |
| Spiritual therapies | 0.0003 | $P < 0.05$ |

[a] The analysis could not be completed for bone-setting, as the number of countries in each income band was too small.

[b] NS, not significant.

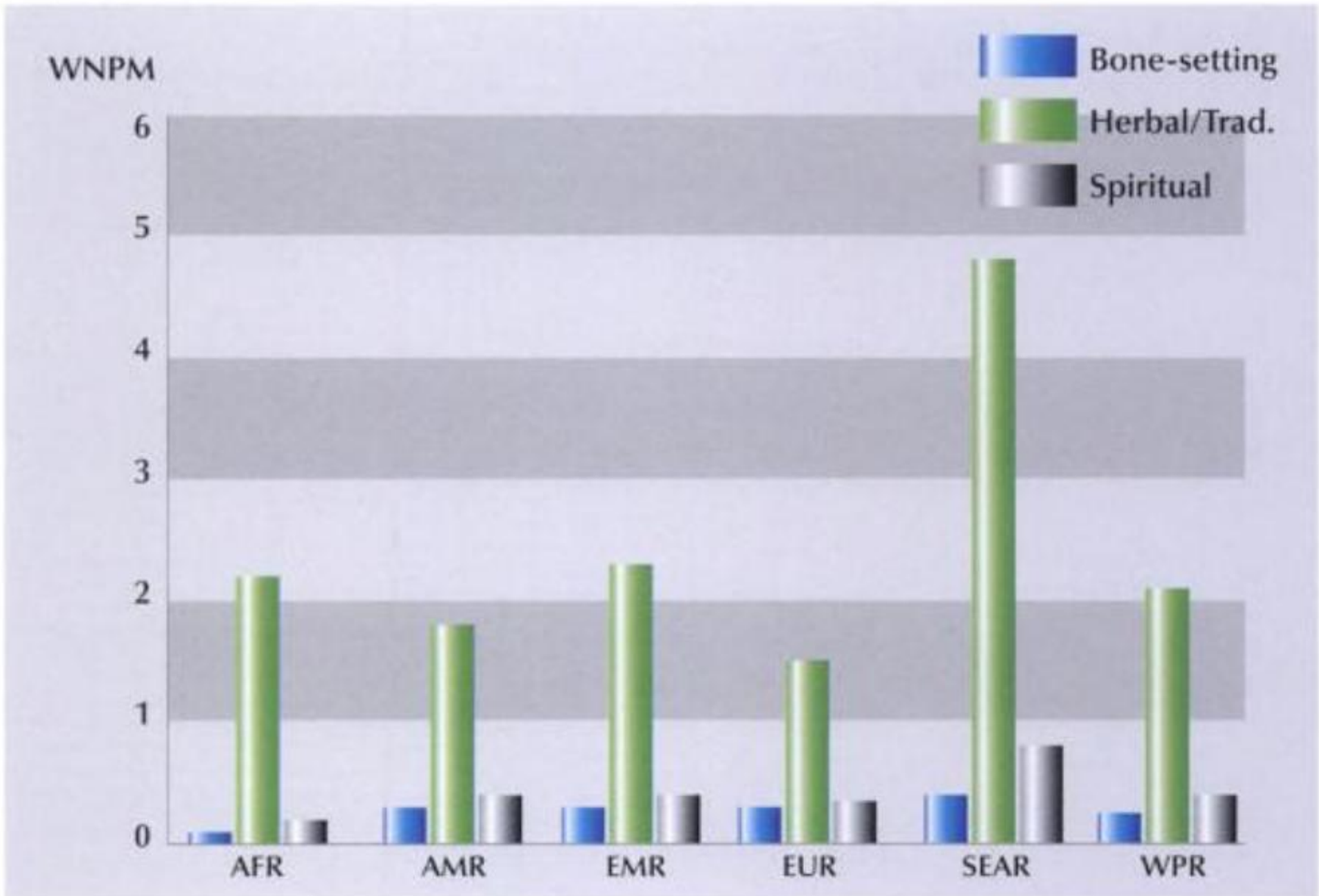
**Figure E.1.4.** Global profile of popularity, as measured by Weighted National Popularity Measure (WNPM) scores, for 11 groupings of TCAM therapies calculated for low-income countries (GDP < Int$ 15 000) and high-income countries (GDP > Int$ 15 000)




ISM, Indian systems of medicine; TCM, traditional Chinese medicine; Acu, acupuncture; Hom, homeopathy, including anthroposophic medicine; Osteo, osteopathy; Chiro, chiropractic; Massage, massage and other manipulative therapies; Aroma, aromatherapy, reflexology and related therapies; Bone, bone-setting; Herbal/Trad, other herbal/traditional medicine; Spiritual, spiritual therapies.

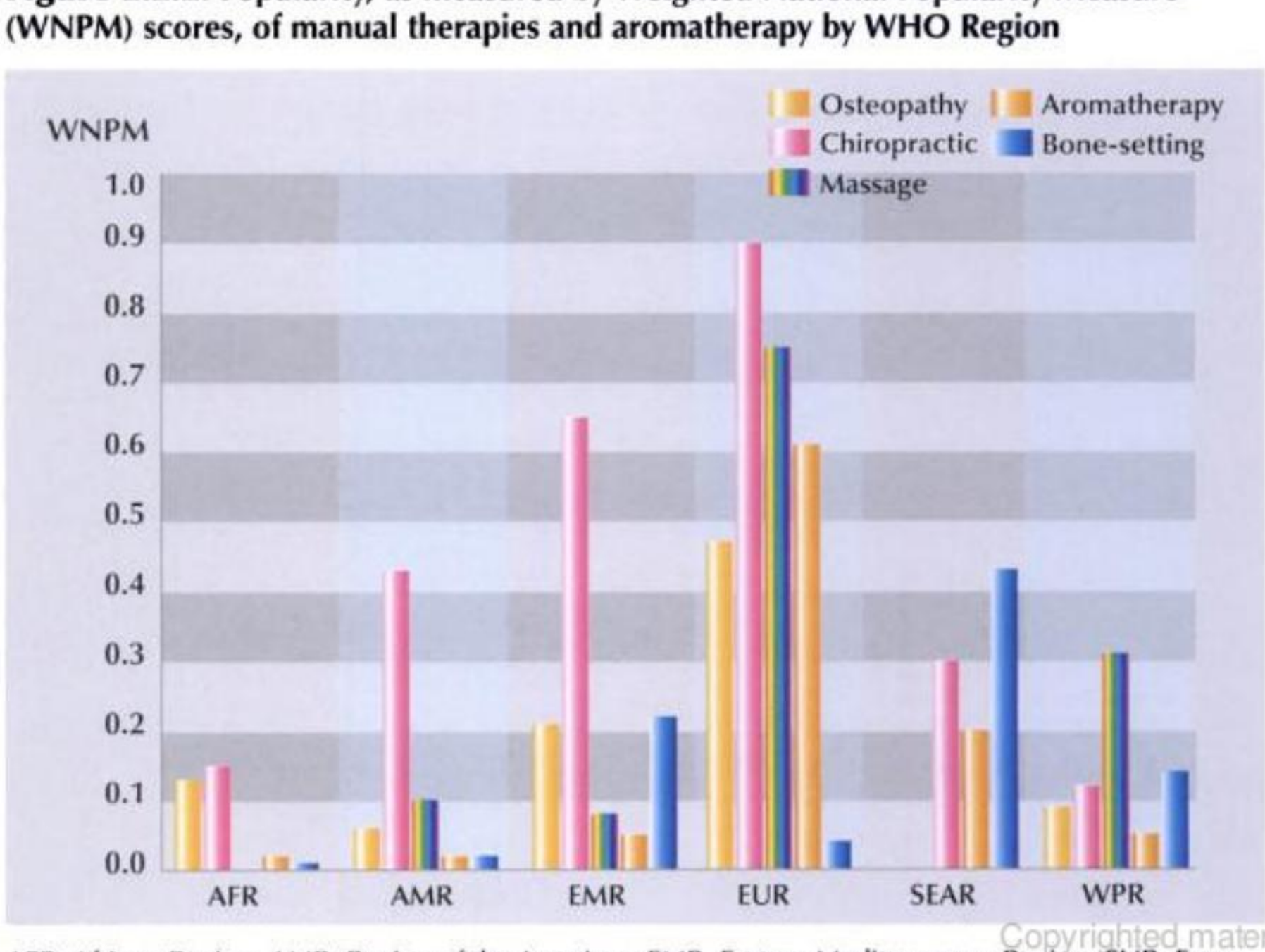
## E2. Popularity of Therapies by Region using Weighted National Popularity Measure Scores

**Figure E.2.1.** Popularity, as measured by Weighted National Popularity Measure (WNPM) scores, of bone-setting, herbal/traditional medicine and spiritual therapies by WHO region




AFR, African Region; AMR, Region of the Americas; EMR, Eastern Mediterranean Region; EUR, European Region; SEAR, South-East Asia Region; WPR, Western Pacific Region.

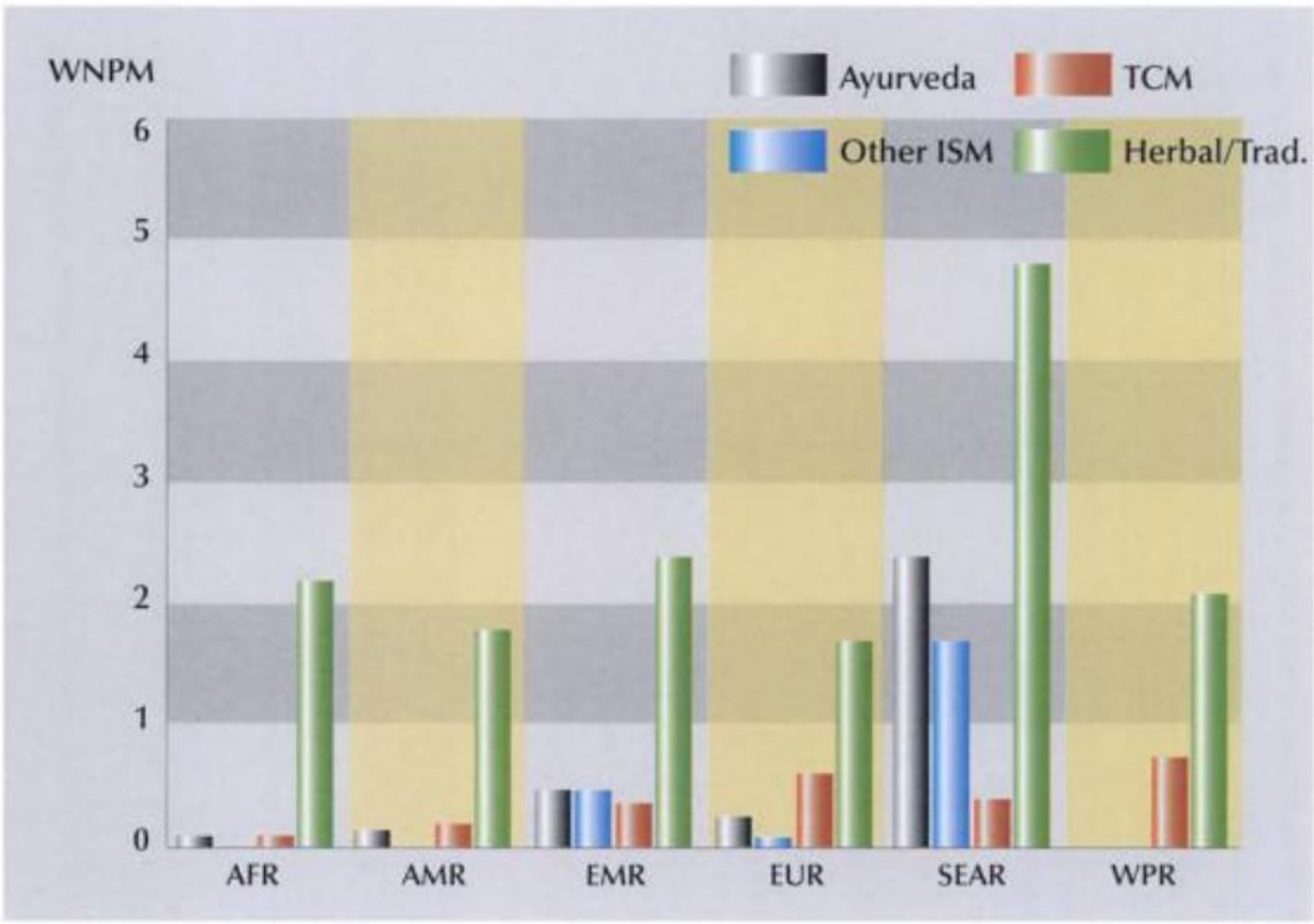
**Figure E.2.2.** Popularity, as measured by Weighted National Popularity Measure (WNPM) scores, of manual therapies and aromatherapy by WHO Region





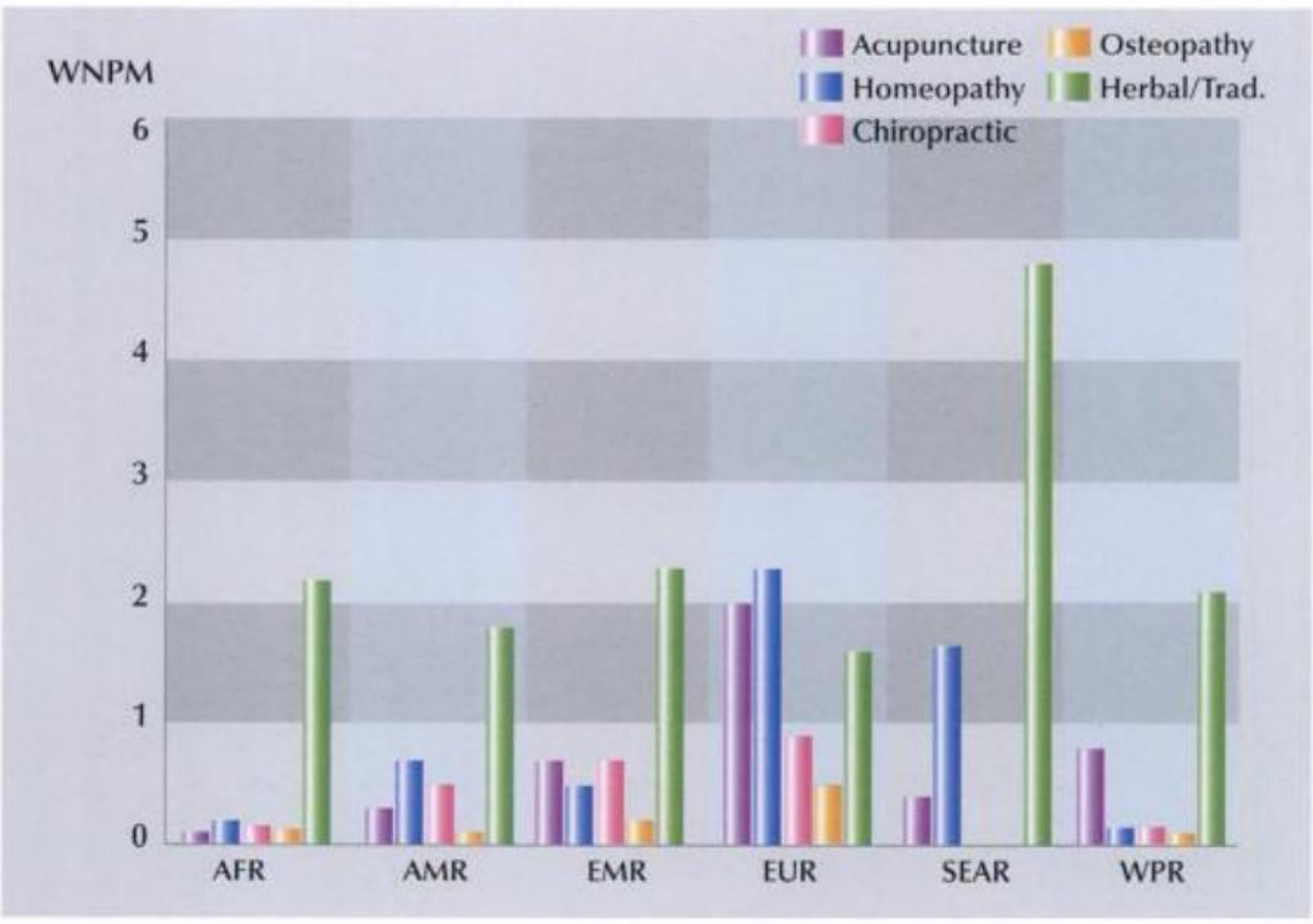

AFR, African Region; AMR, Region of the Americas; EMR, Eastern Mediterranean Region; EUR, Euro-
— Region; SEAR, South-East Asia Region; WPR, Western Pacific Region.

**Figure E.2.3.** Popularity, as measured by Weighted National Popularity Measure (WNPM) scores of Ayurveda, other Indian systems of medicine (ISM), traditional Chinese medicine (TCM) and other herbal/traditional medicine by WHO region




AFR, African Region; AMR, Region of the Americas; EMR, Eastern Mediterranean Region; EUR, European Region; SEAR, South-East Asia Region; WPR, Western Pacific Region.

**Figure E.2.4.** Popularity, as measured by Weighted National Popularity Measure (WNPM) scores, of acupuncture, homeopathy, chiropractic, osteopathy and herbal/traditional medicine by WHO Region




AFR, African Region; AMR, Region of the Americas; EMR, Eastern Mediterranean Region; EUR,

**Table E.2.1. Weighted National Popularity Measure (WNPM) scores for 11 groupings of TCAM by WHO region**

| Therapy grouping | WNPM scores | | | | | |
|---|---|---|---|---|---|---|
| | ***AFR*** | ***AMR*** | ***EMR*** | ***EUR*** | ***SEAR*** | ***WPR*** |
| Ayurveda | 0.04 | 0.06 | 0.35 | 0.12 | 2.45 | 0 |
| Other Indian systems of medicine (Unani, Siddha, Yoga) | 0 | 0 | 0.30 | 0.04 | 1.55 | 0 |
| Traditional Chinese Medicine | 0.04 | 0.08 | 0.17 | 0.39 | 0.20 | 0.69 |
| Acupuncture | 0.09 | 0.29 | 0.65 | 1.98 | 0.50 | 0.86 |
| Homeopathy, including anthroposophic medicine | 0.22 | 0.75 | 0.52 | 2.39 | 1.60 | 0.11 |
| Osteopathy | 0.13 | 0.06 | 0.22 | 0.47 | 0 | 0.08 |
| Chiropractic | 0.15 | 0.46 | 0.65 | 0.90 | 0 | 0.11 |
| Massage and other manipulative therapies | 0 | 0.10 | 0.09 | 0.75 | 0.30 | 0.31 |
| Aromatherapy, reflexology and related therapies | 0.04 | 0.04 | 0.04 | 0.61 | 0.20 | 0.06 |
| Bone-setting | 0.02 | 0.04 | 0.22 | 0.04 | 0.45 | 0.14 |
| Herbal medicine and traditional medicine | 2.20 | 1.73 | 2.39 | 1.57 | 4.80 | 2.08 |
| Spiritual therapies | 0.04 | 0.08 | 0.48 | 0.37 | 0.80 | 0.08 |

AFR, African Region; AMR, Region of the Americas; EMR, Eastern Mediterranean Region; EUR, European Region; SEAR, South-East Asia Region; WPR, Western Pacific Region.

Note: Herbal/traditional medicines were the most popular form of TCAM in all comparisons except in EUR where homeopathy and chiropractic were more popular than herbal/traditional medicines, as measured by the WNPM scores.

# ANNEXES

# ANNEX 1

## INDICATORS FOR COLLECTION OF INFORMATION ON TRM/CAM

The following indicators were prepared by Dr Torkel Falkenberg of the Division of International Health, Department of Public Health Sciences, Karolinska Institute, Sweden, in the course of preparation of the background paper (Annex 2) for the WHO International Consultative Meeting: Global Information on Traditional Medicine/Complementary and Alternative Medicine Practices and Utilization held in Kobe, Japan, 19–21 September, 2001.

| | |
|---|---|
| **Background indicators (A)** | |
| BG 1 | Total population |
| BG 2 | Average annual growth of the population |
| BG 3 | Life expectancy |
| BG 4 | GDP per capita |
| BG 5 | Infant mortality rate |
| BG 6 | Maternal mortality rate |
| BG 7 | Top ten causes of morbidity |
| BG 8 | Top ten causes of mortality |
| BG 9 | Total number of prescribers (including prescribing doctors, nurses, etc.) |
| BG 10 | Total number of TRM/CAM providers within and outside the conventional health system |
| BG 11 | Total health expenditure for the conventional health care sector (total, primary, secondary, tertiary) |
| **Structural Indicators (A)** | |
| ST 1 | Is there an official national TRM/CAM policy? (TRM) |
| ST 2 | Is there TRM/CAM legislation? (TRM) |
| ST 3 | Is there a ministry, institution or national expert committee whose mandate includes TRM/CAM control, education, information and/or research? (TRM) |
| ST 4 | Is there a national voluntary self-regulatory body for TRM/CAM or Association? (TRM?) |
| ST 5 | Are there any financing systems that contribute to the provision of certain TRM/CAM therapies in the public sector? |
| ST 6 | Is there a TRM/CAM user survey conducted in the country in the past twenty years? |
| ST 7 | Is there a TRM educational school in the formal education system? |
| ST 8 | Survey quality assessment indicator |
| **Process indicators (A, B, C)** | |
| PR 1 | Estimated prevalence of national TRM/CAM use. (A) |
| PR 2 | Estimated prevalence of the five most popular individual therapies used. (A) |
| PR 3 | Estimated prevalence of national herbal medicine use. (A) |
| PR 4 | Medical determinants for TRM/CAM use. (B) |
| PR 5 | Patient satisfaction and perceived outcome of TRM/CAM treatment. (B) |
| PR 6 | Sociodemographic characteristics of consumers associated with the use of TRM/CAM. (B) |
| PR 7 | Total out-of-pocket payments and total national expenditure estimates for TRM/CAM utilization. (C) |

(A) indicates that these indicators are to be given priority and are likely to be feasible to apply;
(B) indicates that these are as important but could be less feasible to apply;
(C) indicates that these are of slightly less importance and present problems of feasibility;
TRM indicates that this indicator can be assessed through a separate WHO project;

# ANNEX 2

## Towards a Global Atlas of Traditional/Complementary and Alternative Medicine Utilization – *Provisional indicators for monitoring Traditional, Complementary and Alternative Medicine use*[*]

Torkel Falkenberg, Deputy Head/Researcher, Division of International Health, Department of Public Health Sciences, Karolinska Institute, Sweden

### *Aim and objective of the global TM/CAM utilization review*

A standardized approach to collecting and reviewing existing national TM/CAM utilization information is urgently needed. The nature and design of available primary data surveys vary, depending on a number of factors that need to be accounted for when presenting the results from the global review. This project will collect and review this type of information by means of standardized indicators related to TM/CAM utilization, based on already available information. The indicators will be developed and finalized as part of this project. The aim is to provide Member States with reliable and accurate TM/CAM information regarding:

TM/CAM utilization in different countries and regions;

comparisons of the prevalence of TM/CAM utilisation internationally;

evidence-based policy-making based on empirical evidence of utilization; and

assessing the impact of health sector reform and evaluating the effectiveness of interventions over time.

### *Proposed indicators*

Each structural and process indicator is described with a brief statement that includes:

*definition* – the content of the indicator

*use* – why the indicator is important and what it will measure

*description* – the scope of the indicator and the definitions of key terms

*sources and methods* of data collection and indicator calculation

*limitations* – the limitations of the indicator.

### *Provisional structural indicators*

#### ST 1. Is there an official national TM/CAM policy?

*Use.* The indicator is used to assess the political commitment and the capability of the government to define the objectives of a TM/CAM policy and the activities that need to be undertaken for achieving these national objectives. A national policy is an expression of goals for improving the role of TM/CAM in national health care delivery systems, ensuring the creation of regulatory and legal mechanisms for promoting and maintaining good practice of effective TM/CAM therapies, and stimulating research and education efforts. Policies are also needed in order to respond to issues concerning the protection of indigenous traditional medicine knowledge and the protection of natural resources (such as medicinal plants) used in TM/CAM products.

*Description.* The national TM/CAM policy document is an officially approved document that should be widely available. It should contain not only the key objectives of the national policy but also the main strategies proposed by the government for achieving those objectives. A national TM/CAM policy is different from an act regulating the TM/CAM sector (see ST 2).

*Sources and methods for data collection.* The national TM/CAM policy document should be available from the Ministry of Health. In certain cases the national TM/CAM policy is not a separate document but is part of a national drug policy or national health policy document.

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[*] This article is reproduced from Annexure 1 of the background paper of the International Consultative Meeting: Global Information on Traditional Medicine/Complementary and Alternative Medicine Practices and Utilization,

*Limitations.* Most countries will have no official national TM/CAM policy document, although some components of a policy may be in place. In this case, the indicator will not be appropriate and it will be useful to indicate the situation in the summary form.

## ST 2. Is there TM/CAM legislation?

*Use.* This indicator is used to assess the existence of a legal framework for the TM/CAM sector. Government should enact legislation to ensure the safety, efficacy and quality of certain types of TM/CAM therapies and to regulate production, marketing and provision.

*Description.* The principles of regulation of any health-care profession are to protect the public from unqualified or inadequately trained providers. The effective regulation of a therapy or product allows the public to understand where to look for safe treatment from well trained providers in an environment where their rights are protected. TM/CAM legislation describes the legal conditions under which such activities should be organized, and in line with the national TM/CAM policy if available. The indicator is answered Yes or No, with a few exceptions.

The indicator should be answered in relation to the following.

(a) Is TM/CAM provision in general subject to regulation of a general nature?

(b) Are only certain forms of TM/CAM provision regulated (specify)?

(c) Are all/certain TM/CAM providers legally recognized (specify)?

(d) Which professional categories (conventional such as doctors, nurses and midwifes and/or TM/CAM providers such as chiropractors, osteopaths, homeopaths, etc.) are entitled to provide TM/CAM therapy (list professional category and TM/CAM therapy)?

*Sources and methods for data collection.* The national TM/CAM legislation document(s) should be available from the Ministry of Health and/or the national TM/CAM centre and/or the medical product agency.

*Limitations.* The existence of legislation does not imply that the law is fully implemented.

## ST 3. Is there a ministry, institution or national expert committee whose mandate includes TM/CAM control, education, information and/or research?

*Use.* This indicator is used to determine whether there is a formal and reliable mechanism in place for ensuring that the necessary regulatory and legal mechanisms are created and implemented for promoting and maintaining good practice, that access to TM/CAM is equitable, and that the authenticity, safety and efficacy of certain therapies used are ensured. At the same time, it is imperative for guaranteeing the credibility and recognition of and respect for indigenous health systems. Should a separate professional and/or scientific TM/CAM association exist, this should be noted.

*Description.* A ministry, national TM/CAM centre or national expert committee would be the appropriate authority to identify the steps and plans needed to formulate national policy in this area. The functions and activities should include developing the necessary regulatory and legal reforms to ensure good practice and extend the primary health care coverage, while ensuring the authenticity, safety and efficacy of these medicines. Drawing up of a national list of essential herbal medicines, preparing guidelines on registration requirements, advising on a national licensing systems, advising on means of reporting adverse reactions, developing guidelines on competency and training for TM/CAM providers and informing conventional health care providers about TM/CAM are additional undertakings. The staff should be multidisciplinary and include TM/CAM providers or experts.

*Sources and methods for data collection.* If a national TM/CAM centre or expert committee exists, it should be visited and information should be obtained on the types of activity performed. If there is no centre or committee, such information should be available from the Ministry of Health and/or the national medical products agency. This indicator should be analysed in conjunction with ST 1

*Limitations.* This indicator should be analysed with caution, and will in many cases need to be accompanied by written statements as to the kinds of mechanism and activity are in place and how these are being implemented.

## ST 4. Is there a national voluntary self-regulatory body for TM/CAM?

*Use.* This indicator is used to determine whether there is an effective voluntary self-regulatory body for certain TM/CAM therapies.

*Description.* A voluntary self-regulating mechanism, preferably administered by a single professional body, has been described as enough to protect patients and organize the providers of some therapies (1). Either, bodies concerned with specific TM/CAM therapies or an umbrella organization encompassing all such bodies who fulfil certain criteria may exist.

Features of an effective, voluntary, self-regulating professional body include (*2*):

maintaining a register of individual members or member organizations;

setting educational standards and running an accreditation system for training establishments;

maintaining professional competence among its members with an adequate programme of continuing professional development;

providing codes of conduct, ethics and practice;

maintaining a complaints mechanism for members of the public;

maintaining a system of disciplinary procedure that is accessible to the public;

requiring members to have adequate professional indemnity insurance;

having capacity to represent the whole profession; and

including external representation on the executive councils to represent patients or clients and the wider public interest.

*Sources and methods for data collection.* If a national TM/CAM centre or expert committee exists, it should be visited and information should be obtained related to the five most commonly used TM/CAM therapies. If there is no centre or committee, information should be available from the respective TM/CAM organizations in the country. This indicator should be assessed in conjunction with ST 3 and PR 2.

*Limitations.* There exists considerable variation in levels of professionalization within the TM/CAM world. Even within some distinct therapeutic disciplines there may be considerable fragmentation, sometimes resulting in several bodies, each with different training and educational requirements, codes of practice and complaints procedures. Hence, this indicator should be analysed with caution and will in many cases need to be accompanied by written statements as to the kinds of voluntary self-regulation in place for relevant types of TM/CAM therapies.

## ST 5. Are there any financing systems that contribute to the provision of certain TM/CAM therapies in the public sector?

*Use.* This indicator is used to determine whether there are financing mechanisms to increase the provision of TM/CAM in the public sector and therefore to increase coverage. A few countries have developed financing systems to cover completely or partially the costs of services of certain TM/CAM therapies.

*Description.* Financing systems are defined as any system that, in the public sector, contribute to the provision of services of any TM/CAM therapy by charging patients or the community. Public finance is understood as general government revenues and compulsory health insurance (sometimes known as social insurance) that is either publicly managed or heavily regulated by governments. Private finance includes out-of-pocket payments and voluntary health insurance. These systems can provide complete or partial coverage of the cost of the therapy. The indicator should be analysed

mentary, alternative or integrated depends on the current national definitions and may vary from country to country.

*Sources and methods for data collection.* The information can be obtained through interviews at the Ministry of Health. The indicator is answered Yes or No.

## ST 6. Is there a TM/CAM user survey conducted in the country in the past twenty years?

*Use.* This indicator is used to determine whether surveys exist on use among the public of common TM/CAM therapies available on the public and/or private market.

*Description.* The procedures for surveys may differ from one country to another, but most likely include the following elements: definitions of TM/CAM; utilization rates of certain nationally available TM/CAM therapies and providers over a lifetime and/or 12-month perspective; availability; affordability; quality; and consumer satisfaction. The legal framework, policy development and implementation, national strategies for cooperation and/or integration with conventional medicine could also be assessed.

*Sources and methods for data collection.* The information will be available from the Ministry of Health, national TM/CAM centres and/or national TM/CAM organization(s), and can be obtained through interviews and by reviewing various survey documents. All the identified surveys should be listed, including the full reference to the study.

## ST 7. Is there a TRM educational school in the formal education system?

*Use.* This indicator is used to determine whether there is/are established educational institution(s) either in the public or the private sector. The presence of a formal education system suggests or implies recognition of the TRM system in the country and this in turn would facilitate its development. Training of human resources in planning of the health sector, delivery of health services as well as regulation and legislation pertaining to the TRM can be planned and implemented.

*Description.* In countries where a TRM system has evolved over centuries, the method of teaching by apprenticeship is being replaced by formal institutional training in the public and/or the private sector. At present, schools, institutes and even universities exists for training of the undergraduate and post-graduate students in the various systems of TRM and CAM. With resurgence of interest and increase in the utilization of TCAM all over the world, even schools of modern medicine in the developed countries are having seminars and elective courses in preparing future medical doctors and physicians to better care for their patients.

*Sources and methods of data collection.* The information can be available from the Ministry of Health, the Ministry of Education and/or non-governmental organizations (NGOs) such as professional associations existing within the country or internally. Such information is published officially by the government, NGOs and by the respective schools, institutions and universities in the form of prospectus, brochures, booklets or pamphlets. Increasingly, such information is also available through the Internet in the websites of the educational organizations.

## ST 8. Survey quality assessment indicator

*Use.* Primary data already collected through national or regional TM/CAM utilization levels will be analysed. However, when assessing already collected information retrospectively, certain additional information must be provided such as the reliability of the results, the objectives underlying the survey, the methods used, how TM/CAM was defined, etc. These "qualities" will be compared with international standards for this type of data and will greatly facilitate cross-national comparisons.

*Description.* See the survey quality assessment form below.

*Sources and methods for data collection.* The information can usually be found in the materials and methods section of the report, and/or can be obtained through interviews with the principal investigator(s). This indicator should be assessed in conjunction with ST 6.

| ST 8 | **Survey quality assessment indicator.** |
|---|---|
| Please provide specific comments on the following:<br>If survey had been done in the last 20 years, please provide information on each TRM/CAM that was surveyed according to the following points. Please attach additional answer sheets. | |
| ST 8.1 | The method of data collection (face-to-face interview/telephone interview/self-completion questionnaire/other). |
| ST 8.2 | The sampling methods[a] used to select potential respondents (sampling technique; e.g. random sampling with details of randomization and location (national, regional, rural and/or urban, etc.) of the individuals sampled. |
| ST 8.3 | Period of recall of TRM/CAM use for the respondents (generally lifetime or previous 12 months). |
| ST 8.4 | Number of questionnaire respondents or interview participants (n) finally included. |
| ST 8.5 | The response rate (as presented in the survey) based on the actual number of respondents who fulfilled the inclusion criteria and the actual number of respondents participating in the study, i.e. number of actual respondents assessed/number of respondents eligible for the study multiplied by 100. |
| ST 8.6 | Whether the investigators(s) performed an initial sample size calculation. |
| ST 8.7 | The authors' explanation of their choice of TRM/CAM therapies and definitions presented to respondents. |
| ST 8.8 | The choice of TRM/CAM therapies presented to the respondents or listed and/or assessed in the investigation[b]. |
| ST 8.9 | Whether the questionnaire or interview schedule was tested for reliability as a data collection tool (usually through focus group discussions and/or pilot testing). |
| ST 8.10 | Whether adjustments were made to account for differences between respondents and the general population and/or if the representativeness of survey respondents was examined (gender/socioeconomic status/age/urban/rural/etc.). |
| ST 8.11 | Year of survey. |
| ST 8.12 | The target population in terms of country of origin, population group within the country and age group. |
| ST 8.13 | Estimated reliability of the prevalence results reported (low, medium, high). |
| ST 8.14 | Estimated cost of the whole study, excluding printing cost of the report. |
| ST 8.15 | Estimated working time needed to complete the investigation (months). |
| ST 8.16 | Whether the objective of the investigation was assessed, as presented in the report. |
| ST 8.17 | Whether the language of the report was assessed. |
| ST 8.18 | Whether the report was published (nationally, internationally, governmental, other). |
| ST 8.19 | Give full reference, including author(s), title, journal and year. |

[a] Required to attach the survey report or description of methods.

## *Provisional process indicators*

### PR 1. Estimated prevalence of national TM/CAM use

*Use.* This indicator is used to assess the prevalence of TM/CAM use based on existing national population-based surveys performed over the previous 20 years.

*Description.* Surveys in the TM/CAM field may exist in many different forms and may assess various variables. For the purpose of this study, the inclusion criteria are that the study used survey methods to estimate the extent of TM/CAM use among the general population, and that the prevalence of TM/CAM utilization is expressed in figures so that an estimate for the general population can be provided. A study should be excluded if it estimated only the prevalence of a single therapy or was a profession/patient-based survey, i.e. not representative of the general population.

When provided, estimates of the following should be recorded separately.

#### PR 1.1 Total usage (visits and self-medication) of TM/CAM in combination with conventional medicine or alone for:

(a) the treatment of a disease/health condition and for prevention and/or the maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

#### PR 1.2 Visits to a TM/CAM provider in combination with conventional medicine or alone for:

(a) the treatment of a disease/health condition and for prevention and/or maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

#### PR 1.3 Self-medication with TM/CAM medication or procedure-based therapies in combination with conventional medicine or alone for:

(a) the treatment of a disease/health condition and for prevention and/or the maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

*Sources and methods for data collection.* The information will be available from the Ministry of Health, national TM/CAM centres and/or national TM/CAM organization(s), and can be obtained through interviews and by reviewing various survey documents. All the identified surveys should be listed, including the full reference to the study. In the case of several investigations being present, each survey should be noted using ST 6, but only the most recent one(s) having results of acceptable reliability (as determined through, for example, ST 8) needs to be assessed using the process indicators.

### PR 2. Estimated prevalence of the five most popular individual therapies used

*Use.* This indicator is used to assess the prevalence of the use of individual TM/CAM therapies, based on existing national population-based surveys performed over the previous 20 years.

*Description.* If respondents have been asked about their use of individual TM/CAM therapies, whether presented as a list of therapies or not, estimates the prevalence of use of individual therapies can be provided. This information can be used to list the five most important therapies in the country. For the purpose of this study the same inclusion criteria will apply as for PR 1: the study, used

prevalence of TM/CAM utilization is expressed in figures so that an estimate for the general population can be provided. A study should be excluded if it estimated only the prevalence of a single therapy or was a profession/patient-based survey, i.e. not representative of the general population.

When provided, estimates of the following should be recorded separately.

**PR 2.1 Total usage (visits and self-medication) of individual (top 5) TM/CAM therapies for:**

(a) the treatment of a disease and for prevention and/or maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

**PR 2.2 Visits to individual (top 5) TM/CAM therapy providers for:**

(a) the treatment of a disease and for prevention and/or the maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

**PR 2.3 Self-medication with individual (top 5) TM/CAM therapies (medication or procedure-based therapies) for:**

(a) the treatment of a disease and for prevention and/or the maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

*Sources and methods for data collection.* The information will be available from the Ministry of Health, national TM/CAM centres and/or national TM/CAM organization(s), and can be obtained through interviews and by reviewing various survey documents. All the identified surveys should be listed, including the full reference to the study. In the case of several investigations being present, each survey should be noted using ST 6 but only the most recent one(s) having results of acceptable reliability (as determined through, for example, ST 7) needs to be assessed using the process indicators.

## PR 3. Estimated prevalence of national herbal medicine use

*Use.* This indicator is used to assess the prevalence of the use of herbal medicine, based on existing national population-based surveys performed over the past 20 years.

*Description.* Surveys of the herbal medicine field may exist in many different forms and many assess various variables. For the purpose of this study, the inclusion criteria are that the study used survey methods to estimate the extent of herbal medicine use (in a few countries also included as "dietary supplement") among the general population, and that the prevalence of herbal medicine utilization is expressed in figures so that an estimate for the general population can be provided. A study should be excluded if it was a profession/patient-based survey, i.e. not representative of the general population. When provided, estimates of the following should be recorded separately.

**PR 3.1 Total usage (visits and self-medication) of herbal medicine for either;**

(a) the treatment of a disease and for prevention/maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

**PR 3.2 Visits to a provider of herbal medicines for:**

(a) the treatment of a disease and for prevention and/or the maintenance of health;

(b) the treatment of a disease; or

### PR 3.3 Self-medication with herbal medicines for;

(a) the treatment of a disease and for prevention and/or the maintenance of health;

(b) the treatment of a disease; or

(c) prevention and/or the maintenance of health.

*Sources and methods for data collection.* The information will be available from the Ministry of Health, national TM/CAM centres and/or national TM/CAM organization(s), and can be obtained through interviews and by reviewing various survey documents. All the identified surveys should be listed, including the full reference to the study. In the case of several investigations being present, each survey should be noted using ST 6, but only the most recent one(s) having results of acceptable reliability (as determined through, for example, ST 7) needs to be assessed using the process indicators.

## PR 4. Medical determinants for TM/CAM use

*Use.* Many surveys of TM/CAM utilization also assess the reasons for use in terms of health-seeking behaviour, patient satisfaction or outcome of treatment. This core indicator will assess only a few determinants of TM/CAM use.

*Description.* Reasons for TM/CAM utilization cover a broad spectrum of health problems, as well as preventive measures and general interest. Admittedly, many critical questions in TM/CAM use have to do with whether users and providers follow appropriate diagnostic procedures, and whether they select therapies and dosages to fit underlying health problems. However, determining the quality of adequacy or health-seeking behaviour is complex and lends itself to an additional and more health-problem-specific investigation. The determinants for the use of TM/CAM may be associated with a number of diagnosed chronic or acute illnesses, or the respondent using TM/CAM may be free of any disease and may use it for preventive reasons or may just be interested. It is also possible that the respondents may use both TM/CAM and conventional medical therapies to treat the same condition. Provided below are a number of possible sets of questions likely to have been posed in some surveys.

When provided, information on the following should be recorded separately.

### PR 4.1 Total usage (visits and self-medication) of a specific TM/CAM therapy for:

(a) which type of health condition(3)?

(b) which type of health condition, in combination with conventional health care?

### PR 4.2 Visits to a specific TM/CAM provider for:

(a) which type of health condition?

(b) which type of health condition, in combination with conventional health care?

### PR 4.3 Self-medication with specific TM/CAM medication or procedure based therapies for:

(a) which type of health condition?

(b) which type of health condition, in combination with conventional health care?

*Sources and methods for data collection.* The information will be available from the Ministry of Health, national centres for TM/CAM and/or national TM/CAM organization(s), and can be obtained through interviews and reviewing various survey documents. All the identified surveys should be listed, including the full reference to the study.

*Limitations.* Not all variables of interest listed above may be available or presented in the report(s) assessed.

## PR 5. Patient satisfaction and perceived outcome of TM/CAM treatment



*Use.* Popularity of TM/CAM has been attributed to a few general factors: (a) greater availability and [illegible] in developing countries; (b) dissatisfaction with

the side-effects and limited success of conventional health care in treating some chronic and painful conditions; and (c) preference for a more personal and holistic care. Hence a few internationally published surveys of TM/CAM utilization also assess the outcome of use in terms of being on the level of patient satisfaction or as change in self-perceived health.

*Description.* The assessment of perceived outcome of consultation or treatment with TM/CAM may be associated with a number of possible sets of questions likely to have been posed in the survey.

**PR 5.1 Patient satisfaction (4) with:**

(a) total usage (visits and self-medication) of TM/CAM therapies;

(b) total usage (visits and self-medication) of a specific TM/CAM therapy;

(c) visits to TM/CAM providers in general;

(d) visits to a specific TM/CAM provider;

(e) self-medication with TM/CAM medication(s) or procedure-based therapies in general;

(f) self-medication with a specific TM/CAM medication or procedure-based therapy.

**PR 5.2 Perceived patient outcome for general health status following:**

(a) total usage (visits and self-medication) of TM/CAM therapies;

(b) total usage (visits and self-medication) of a specific TM/CAM therapy;

(c) visits to TM/CAM providers in general;

(d) visits to a specific provider;

(e) self-medication with TM/CAM medication(s) or procedure-based therapies in general;

(d) self-medication with a specific TM/CAM medication or procedure-based therapies.

**PR 5.3 Perceived patient outcome (5) for separate health conditions following:**

(a) total usage (visits and self-medication) of TM/CAM therapies;

(b) total usage (visits and self-medication) of a specific TM/CAM therapy;

(c) visits to TM/CAM providers in general;

(d) visits to a specific TM/CAM provider;

(e) self-medication with TM/CAM medication(s) or procedure-based therapies in general;

(f) self-medication with a specific TM/CAM medication or procedure-based therapy.

*Sources and methods for data collection.* In the case of several investigations being present, each survey should be reported provided that they complement each other and are of acceptable reliability (as determined through, for example, ST 7).

*Limitations.* Not all variables of interest listed above may be available or presented in the report(s) assessed.

## PR 6. Sociodemographic characteristics of consumers associated with use of TM/CAM

*Use.* Qualitative and quantitative research in developed countries have shown that people who consult TM/CAM providers usually have long-standing conditions for which conventional medicine has not provided a satisfactory solution (*6,7*). Other reasons, such as affordability and availability, are additional important factors in developing countries. Moreover, characteristics such as sex, race, education, age group, self-rated health and income may influence the level of use. The aim of this indicator is to describe "who" uses TM/CAM by assessing a few characteristics associated with its use, provided that this has been analyzed in the identified survey(s).



*Description.* Surveys assessing certain qualities of TM/CAM consumers may exist in many different

in a few previously published investigations. When the characteristics of those who have used TM/CAM compared with non-users are presented, these should be recorded separately. If patterns of use have been analyzed statistically, this should be noted and presented, for example, a study has found - use - to be significantly more common among women (48.9%) than men (37.8%) (P = 0.001) (*8*).

**PR 6.1 Usage (visits and self-medication) of TM/CAM associated with certain sociodemographic characteristics:**

(a) Age

(b) Economic status (normally self-assessed)

(c) Education

(d) Income

(e) Availability

(f) Affordability

(g) Racial groups

(h) Urban vs. rural population

(i) Regional differences

(j) Health status (normally self-rated)?

(k) Other, namely: .....

**PR 6.2 Visits to a TM/CAM provider associated with certain sociodemographic characteristics of consumers including the categories listed above.**

**PR 6.3 Self-medication with TM/CAM medication or procedure-based therapies associated with certain sociodemographic characteristics of consumers, including the categories listed above.**

*Sources and methods for data collection.* These are the same as for PR 1. This indicator should be analyzed in conjunction with PR 1, PR 2 and PR 4.

## PR 7. Total out-of-pocket payments and total national expenditure estimates for TM/CAM utilization

*Use.* In addition to prevalence figures, out-of-pocket expenditure for TM/CAM is important in describing its significance. Total national costs for TM/CAM utilization are equally important and have sometimes also been assessed in the few surveys published internationally.

*Description.* The assessment of costs for TM/CAM may be associated with a number of possible sets of questions. When provided, information on the following should be recorded separately.

**PR 7.1 Total out-of-pocket (9) spending for:**

(a) total usage (visits and self-medication) for TM/CAM;

(b) total usage (visits and self-medication) of a specific TM/CAM therapy;

(c) visits to a specific TM/CAM provider;

(d) self-medication with TM/CAM medication or procedure-based therapies;

(e) self-medication with a specific TM/CAM medication or procedure-based therapy.

**PR 7.2 Total national spending for:**

(a) total usage (visits and self-medication) for TM/CAM;

(b) total usage (visits and self-medication) of a specific TM/CAM therapy;

(d) self-medication with TM/CAM medication or procedure-based therapies;

(e) self-medication with a specific TM/CAM medication or procedure-based therapy.

*Sources and methods for data collection.* The information will be available from the Ministry of Health, national TM/CAM centres and/or national TM/CAM organization(s), and can be obtained through interviews and by reviewing various survey documents. All the identified surveys should be listed, including the full reference to the study. The total national cost of selected forms of TM/CAM use can be determined by calculating the number of visits, self-medication or herbal medicine use (when presented separately) and by multiplying this with the total number of visits or occasions of use for each form of TM/CAM and by an average per visit per use.

Out-of-pocket costs can be constructed for each therapy by multiplying the average full price per visit or per use by a set fraction (corresponding to insurance coverage out of the total cost) if the user had partial insurance, or by zero if insurance paid the full price of the visit. Alternatively, when respondents estimate their own yearly out-of-pocket costs, the median costs can be multiplied with the national prevalence rate of use of the specific TM/CAM therapy and the national population. Out-of-pocket costs for herbal medicines can be calculated by multiplying the total population of users by the average cost of herbal medicines *per capita* per year, provided that no insurance covers herbals. This indicator should be analyzed in conjunction with PR 1, PR 2 and ST 5.

*Limitations.* Not all variables of interest listed above may be available or presented in the report(s) assessed.

## References

1. *Complementary and alternative medicine. House of Lords, Session 1999 - 2000, 6th report.* London, Stationery Office, 2000.
2. Budd S, Mills S. *Regulatory prospects for complementary and alternative medicine: information pack.* Exeter, University of Exeter, 2000.
3. Diagnostic classifications of respondents using TM/CAM when presented in the report; other reports may refer to "self-rated health" (e.g. excellent, good, fair, poor); a list of common medical conditions; problem type (physical symptoms, non-specific pain, psychological); etc.
4. Respondent satisfaction with the TM/CAM treatment is sometimes recorded as: dissatisfied, fair, good, very good, excellent.
5. Respondent perception of efficacy of TM/CAM treatment of disease is sometimes recorded as: better, cured, worse, no change.
6. Astin JA. Why patients use alternative medicine. *Journal of the American Medical Association,* 1998, 279:1548–1553.
7. For a review see the series on complementary and alternative medicine by Zolleman & Vickers in BMJ during 1999, which has also been printed separately as *ABC of complementary medicine,* London, British Medical Journal Books, 2000.
8. Eisenberg D et al. Trends in alternative medicine use in the United States, 1990–1997. *Journal of the American Medical Association,* 1998, 280: 1569–1575.
9. Out-of-pocket costs are limited to the fee for the visit and the cost of medication(s) or procedure.

# ANNEX 3

## Revised Indicator Form

### Developed by the Global Initiative For Traditional Systems (GIFTS) of Health, University of Oxford, *July 2003*

This form has been redesigned for rapid completion and analysis. Some questions can be answered by marking an X in the appropriate box (e.g. Yes/No/In process/Don't know). Others require brief information such as numbers of practitioners; names of therapies, institutions or professional associations; or percentages of the population using TCAM. There is space for additional details if known.

## BACKGROUND INDICATORS

| **BG9. Approximately how many of the following are there in the country?** | |
|---|---|
| (a) Physicians | |
| (b) Dentists | |
| (c) Nurse prescribers | |
| (d) Other prescribers | |

| **BG10. Approximately how many of the following are there in the country?** | |
|---|---|
| (a) Traditional herbalists, or other practitioners providing mainly plant, animal or mineral-based treatments | |
| (b) Traditional religious healers, or other practitioners providing mainly spiritual or faith-based treatments | |
| (c) Traditional bone setters, masseurs, or other practitioners providing mainly orthopaedic treatments | |
| (d) Ayurvedic practitioners | |
| (e) Unani/Tibb practitioners | |
| (f) Other traditional health practitioners (specify): | |
| (g) Traditional, indigenous or folk health practitioners **in general** (if no figures are available for the specific categories listed above) | |
| (h) Physicians providing acupuncture | |
| (i) Non-physician acupuncturists | |
| (j) Physicians providing homeopathy or anthroposophy | |
| (k) Non-physician homeopaths or anthroposophists | |
| (l) Physicians providing chiropractic | |
| (m) Non-physician chiropractors | |
| (n) Physicians providing osteopathy | |
| (o) Non-physician osteopaths | |
| (p) Physicians providing herbal medicine or naturopathy | |
| (q) Nutritional therapists | |
| (r) Reflexologists | |

| | |
|---|---|
| (s) Other complementary or alternative therapists (specify): | |
| (t) Complementary/alternative therapists **in general** (if no figures are available for the specific categories listed above) | |

## STRUCTURAL INDICATORS

| | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| **ST1** | Is there an official **national TCAM policy?** | | | | |
| Details: | | | | | |

| | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| **ST2a** | Are there **general laws** applying to all forms of TCAM? (For example: only qualified medical doctors can practise TCAM; certain diseases may not be treated with TCAM; advertising of TCAM is forbidden) | | | | |
| Details: | | | | | |

| | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| **ST2b.i** | Are there **specific laws about practitioners** of certain forms of TCAM? (For example: only qualified medical doctors can practise acupuncture; chiropractors must have formal training; traditional healers must register with a local health authority) | | | | |
| Details: | | | | | |

| | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| **ST2b.ii** | Are there **specific laws about products** used for certain forms of TCAM? (For example: herbal or homeopathic medicines must be registered; proof of safety and/or efficacy must be provided; herbal medicines are not allowed to contain heavy metals or pesticides) | | | | |
| Details: | | | | | |

| ST2c | Are any of these TCAM providers **legally recognized?** | | | |
|---|---|---|---|---|
| | | **Yes** | **No** | **Don't know** |
| | (a) Herbalists | | | |
| | (b) Spiritual or faith healers | | | |
| | (c) Traditional birth attendants/midwives | | | |
| | (d) Traditional bone-setters/orthopaedists | | | |
| | (e) Unani practitioners | | | |
| | (f) Ayurvedic practitioners | | | |
| | (g) Osteopaths | | | |
| | (h) Chiropractors | | | |
| | (i) Homeopaths | | | |
| | (j) Acupuncturists/practitioners of Chinese medicine | | | |
| | (k) Others – please specify below | | | |
| Further information: | | | | |

| ST2d | Which **professionally-qualified health-care practitioners** are entitled to provide TCAM therapies? | | | |
|---|---|---|---|---|
| | | **Yes** | **No** | **Don't know** |
| | (a) Physicians with TCAM training | | | |
| | (b) Physicians without TCAM training | | | |
| | (c) Nurses with TCAM training | | | |
| | (d) Nurses without TCAM training | | | |
| | (e) Physiotherapists with TCAM training | | | |
| | (f) Physiotherapists without TCAM training | | | |
| | (g) Midwives with TCAM training | | | |
| | (h) Midwives without TCAM training | | | |
| | (i) Other health care professionals (please specify) | | | |
| Further information: | | | | |

| | | **Yes** | **In process** | **No** | **Don't know** |
|---|---|---|---|---|---|
| **ST2e.i** | Are there **education or training** programmes for TCAM providers **within the conventional health system** (e.g. physicians, nurses, physiotherapists, midwives)? | | | | |
| Details: | | | | | |

| | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| **ST2e.ii** | Are there **education or training** programmes for TCAM providers **outside the conventional health system** (e.g. herbalists, traditional birth attendants, spiritual/faith healers, lay homeopaths)? | | | | |
| Details: | | | | | |

| **ST3** | Does the mandate of any of the following **institutions** include TCAM control, information, education and/or research? | | | | |
|---|---|---|---|---|---|
| | | **Yes** | **In process** | **No** | **Don't know** |
| | (a) Ministry of Health | | | | |
| | (b) Ministry of Education | | | | |
| | (c) Other ministry (specify): | | | | |
| | (d) National Institute of Health | | | | |
| | **Are there any of the following institutions** in the country? | | | | |
| | (e) National expert committee for TCAM | | | | |
| | (f) National TCAM advisory board | | | | |
| | (g) Other national institution dedicated to TCAM | | | | |
| Details: | | | | | |

| **ST4** | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| | Are there any **professional organizations** of TCAM practitioners? | | | | |
| | Do any of them act as **voluntary self-regulatory bodies** (membership restricted to qualified and licensed practitioners; codes of practice or ethical guidelines; disciplinary procedures)? | | | | |
| Details: | | | | | |

| **ST5** | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| | Are there any **other information or advisory services** relating to TCAM? | | | | |
| Details: | | | | | |

| ST6 | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| | Are any TCAM therapies covered by **public health insurance?** | | | | |
| | Are any TCAM therapies provided **free of charge in public hospitals?** | | | | |
| | Are there any **other financing systems** that contribute to the provision of TCAM in the public sector? | | | | |
| Details: | | | | | |

| ST7 | | Yes | In process | No | Don't know |
|---|---|---|---|---|---|
| | Have there been any **surveys of the general population** in the past 20 years that provide information on the utilization of TCAM therapies, either as practitioner visits or self-medication? | | | | |
| | Have there been any **patient surveys** in the past 20 years (e.g. all cancer patients at a particular hospital, or all users of a specific GP service) that provide information on the utilization of TCAM therapies? | | | | |
| | Have there been any **surveys of health practitioners** in the past 20 years that provide relevant information on TCAM utilization? | | | | |
| | Have there been any **surveys of samples of TCAM consumers** in the past 20 years that provide information on reasons for use, satisfaction, perceived outcomes, out-of-pocket expenditure, etc? | | | | |
| | Have there been **any other surveys** (e.g. of health insurers or phytomedicine manufacturers) in the past 20 years that provide relevant information on TCAM? | | | | |
| Details: | | | | | |

## ST8 Survey Quality Indicator

To be completed for EACH GENERAL POPULATION SURVEY (copy and paste as necessary). There is no need to complete this indicator for patient, practitioner or consumer surveys.

| | |
|---|---|
| Name(s) of investigator(s) | |
| Year of survey | |
| Country | |
| Ethnic group within country | |
| Target age group | |
| Publication details | |

| Method of data collection | Postal survey | Telephone survey | Face-to-face interview | Other | Not known |
|---|---|---|---|---|---|
| | | | | | |
| Details: | | | | | |

| Sampling methods used to select potential respondents | Social security number | Medical records | Other | Not known |
|---|---|---|---|---|
| | | | | |
| Details: | | | | |

| Period of recall of TCAM use for the respondents | Past 12 months | Lifetime | Other | Not known |
|---|---|---|---|---|
| | | | | |
| Details: | | | | |

| | |
|---|---|
| No. of respondents or interview participants (n) finally included | |
| Response rate, as presented in the survey (%) | |

| | Yes | No | Not known |
|---|---|---|---|
| Did the investigator(s) perform an initial sample size calculation? | | | |
| Was the questionnaire/interview schedule tested for reliability? | | | |
| Were adjustments made to account for differences between respondents and the general population? | | | |
| Was the representativeness of respondents examined? | | | |
| Details: | | | |

| Authors' explanation of their choice of TCAM therapies and definitions: |
|---|
| Choice of TCAM therapies presented to respondents: |

## PROCESS INDICATORS

Tables should be copied and pasted as necessary if more than one set of survey data is available. Each set of data must be referenced.

| **PR1.** Estimated percentage of the general population: | |
|---|---|
| (a) using **any form of TCAM** | % |
| (b) visiting any kind of TCAM provider | % |
| (c) self-medicating with any kind of TCAM | % |

| Name the five most popular individual TCAM therapies: |
|---|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |

| **PR2.1.1.** Estimated percentage of the general population: | |
|---|---|
| (a) using the **most popular** TCAM therapy (total: visits and self-medication) | % |
| (b) visiting a provider of the most popular TCAM therapy | % |
| (c) self-medicating with the most popular TCAM therapy | % |

| **PR2.1.2.** Estimated percentage of the general population: | |
|---|---|
| (a) using the **second** most popular TCAM therapy (total) | % |
| (b) visiting a provider of the second most popular TCAM therapy | % |
| (c) self-medicating with the second most popular TCAM therapy | % |

| **PR2.1.3.** Estimated percentage of the general population: | |
|---|---|
| (a) using the **third** most popular TCAM therapy (total) | % |
| (b) visiting a provider of the third most popular TCAM therapy | % |
| (c) self-medicating with the third most popular TCAM therapy | % |

| **PR2.1.4.** Estimated percentage of the general population: | |
|---|---|
| (a) using the **fourth** most popular TCAM therapy (total) | % |
| (b) visiting a provider of the fourth most popular TCAM therapy | % |
| (c) self-medicating with the fourth most popular TCAM therapy | % |

| **PR2.1.5.** Estimated percentage of the general population: | |
|---|---|
| (a) using the **fifth** most popular TCAM therapy (total) | % |
| (b) visiting a provider of the fifth most popular TCAM therapy | % |
| (c) self-medicating with the fifth most popular TCAM therapy | % |

| **PR3.** Estimated percentage of the general population: | |
|---|---|
| (a) using **herbal medicine** (total) | % |
| (b) visiting a provider of herbal medicine | % |
| (c) self-medicating with herbal medicine | % |

## PR4. Medical determinants of TCAM use

The first set of tables (PR4.1) should be used when the data are in the form of patient surveys, e.g. "Cancer: 30% of patients have used some form of TCAM during their lifetime" or "Mental illness: 2.5% of patients had visited a traditional healer in the past year". The second set of tables should be used when the data are in the form of population surveys or TCAM consumer surveys, e.g. "5% of the population have used TCAM for general health maintenance during their lifetime" or "50% of those visiting a chiropractor in the past year did so because of back pain". The type of survey and period of recall MUST be stated.

| | |
|---|---|
| **PR4.1a** | Health conditions associated with **TCAM use** (all therapies; visits and self-med) |
| **PR4.1b** | Health conditions associated with use of a **specific TCAM therapy** (visits and self-medication) |
| | Type of therapy: |
| | Conditions: |
| **PR4.1c** | Health conditions associated with **visits to TCAM providers** (all therapies) |
| **PR4.1d** | Health conditions associated with visits to a **specific TCAM provider** |
| | Type of provider: |
| | Conditions: |
| **PR4.1e** | Health conditions associated with **self-medication** with TCAM (all therapies) |
| **PR4.1f** | Health conditions associated with **self-medication with a specific therapy** |
| | Type of therapy: |
| | Conditions: |

| | |
|---|---|
| **PR4.2a** | **Reasons for TCAM use** (all therapies; visits and self-med) |
| **PR4.2b** | Reasons for use of a **specific TCAM therapy** (visits and self-medication) |
| | Type of therapy: |
| | Conditions: |
| **PR4.2c** | Reasons for **visits to TCAM providers** (all therapies) |
| **PR4.2d** | Reasons for visits to a **specific type of TCAM provider** |
| | Type of provider: |
| | Conditions: |
| **PR4.2e** | Reasons for **self-medication** with TCAM (all therapies) |
| **PR4.2f** | Reasons for **self-medication with a specific TCAM therapy** |
| | Type of therapy: |
| | Conditions: |

## PR5. Patient satisfaction and perceived patient outcomes

Data should be reproduced as provided, e.g. '70% satisfied, 20% dissatisfied, 10% no opinion' or '10% cured, 20% much improved, 50% slightly improved, 15% no change, 5% worse'. Please do not attempt to standardise wording across different surveys. Type of survey and reference should also be given.

| **PR5.1.** *Patient satisfaction with:* | | |
|---|---|---|
| (a) | TCAM use (all therapies; visits and self-medication) | |
| (b) | A specific TCAM therapy (visits and self-medication) | |
| (c) | Visits to TCAM providers (all therapies) | |
| (d) | Visits to a specific TCAM provider | |
| (e) | Self-medication with TCAM (all therapies) | |
| (f) | Self-medication with a specific TCAM therapy | |

| **PR5.2.** *Perceived patient outcome (general health status) for:* | | |
|---|---|---|
| (a) | TCAM use (all therapies; visits and self-medication) | |
| (b) | A specific TCAM therapy (visits and self-medication) | |
| (c) | Visits to TCAM providers (all therapies) | |
| (d) | Visits to a specific TCAM provider | |
| (e) | Self-medication with TCAM (all therapies) | |
| (f) | Self-medication with a specific TCAM therapy | |

| **PR5.3.** *Perceived outcome for a specific health condition:* | | |
|---|---|---|
| (a) | TCAM use (all therapies; visits and self-medication) | |
| (b) | A specific TCAM therapy (visits and self-medication) | |
| (c) | Visits to TCAM providers (all therapies) | |
| (d) | Visits to a specific TCAM provider | |
| (e) | Self-medication with TCAM (all therapies) | |
| (f) | Self-medication with a specific TCAM therapy | |

## PR6. Sociodemographic characteristics of consumers associated with TCAM use

The first column should be used for data in the form "20% of people over the age of 65 have used TCAM", and the second for data in the form "20% of TCAM users are over the age of 65". PR6 tables can be adapted for individual therapies as required (number as PR6.4, etc).

| **PR6.1 Total usage of TCAM,** all therapies (visits and self-medication) | | | |
|---|---|---|---|
| | | **% of this sub-population use TCAM** | **% of TCAM users have this characteristic** |
| (a) | Age | | |
| (b) | Economic status | | |
| (c) | Education | | |
| (d) | Income | | |
| (e) | Availability | | |
| (f) | Affordability | | |
| (g) | Racial groups | | |
| (h) | Urban vs. rural | | |
| (i) | Regional differences | | |
| (j) | Health status | | |
| (k) | Gender | | |
| (l) | Other | | |

| **PR6.2 Visits to TCAM providers,** all therapies | | | |
|---|---|---|---|
| | | **% of this sub-population visit TCAM providers** | **% of people who visit TCAM providers have this characteristic** |
| (a) | Age | | |
| (b) | Economic status | | |
| (c) | Education | | |
| (d) | Income | | |
| (e) | Availability | | |
| (f) | Affordability | | |
| (g) | Racial groups | | |
| (h) | Urban vs. rural | | |
| (i) | Regional differences | | |
| (j) | Health status | | |
| (k) | Gender | | |
| (l) | Other | | |

| **PR6.3 Self-medication with TCAM,** all therapies | | | |
|---|---|---|---|
| | | **% of this sub-population self-medicate with TCAM** | **% of people who self-medicate with TCAM have this characteristic** |
| (a) | Age | | |
| (b) | Economic status | | |
| (c) | Education | | |
| (d) | Income | | |
| (e) | Availability | | |
| (f) | Affordability | | |
| (g) | Racial groups | | |
| (h) | Urban vs. rural | | |
| (i) | Regional differences | | |
| (j) | Health status | | |
| (k) | Gender | | |
| (l) | Other | | |

## PR7. Total out-of-pocket payments and total national expenditure estimates for TCAM utilisation

| PR7.1. Total out-of-pocket spending for: | | |
|---|---|---|
| (a) | TCAM use (all therapies; visits and self-medication) | |
| (b) | A specific TCAM therapy (visits and self-medication) | |
| (c) | Visits to TCAM providers (all therapies) | |
| (d) | Visits to a specific type of TCAM provider | |
| (e) | Self-medication with TCAM (all therapies) | |
| (f) | Self-medication with a specific type of TCAM therapy | |

| PR7.2. Total national expenditure for: | | |
|---|---|---|
| (a) | TCAM use (all therapies; visits and self-medication) | |
| (b) | A specific TCAM therapy (visits and self-medication) | |
| (c) | Visits to TCAM providers (all therapies) | |
| (d) | Visits to a specific type of TCAM provider | |
| (e) | Self-medication with TCAM (all therapies) | |
| (f) | Self-medication with a specific type of TCAM therapy | |

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The WHO Global Atlas of Traditional, Complementary and Alternative Medicine gives information at-a-glance on the status of this diverse and expanding field of medicine around the world. It comprises a map volume and a text volume.

Through global and regional maps and tables, the map volume provides a visual representation of topics such as the popularity of herbal/traditional medicine, Ayurveda, Siddha, Unani, traditional Chinese medicine, homeopathy, acupuncture, chiropractic, osteopathy, bone-setting, spiritual therapies, and others; national legislation and traditional medicine policy; public financing; legal recognition of traditional medicine practitioners by their area of therapy; education and professional regulation; conventional health-care practitioners who are entitled to provide various traditional, complementary and alternative therapies; and many other aspects.

The text volume expands and supplements the map volume through detailed accounts of the development of traditional, complementary and alternative medicine in 23 countries across the world, as well as overviews of the status in each of the six WHO Regions.

Through these two volumes, a global picture of the development of traditional, complementary and alternative medicine becomes evident, revealing people's belief in and dependence on different traditional health systems around the world.

The Atlas is an invaluable tool for policy makers, national health authorities and those with expertise and interest in the growing field of traditional, complementary and alternative medicine. It also provides critical information for UN agencies, other international and nongovernmental organizations, and for academic and research institutions working in the field of traditional medicine.

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