

Agent based model pada penyebaran terorisme = An agent based model for transmissions of terrorism

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Abstrak

Terorisme adalah kejahatan terhadap kemanusiaan dan merupakan masalah sosial yang kompleks serta dapat menjadi ancaman serius terhadap kedaulatan setiap negara, termasuk Indonesia. Salah satu metode untuk mempelajari kompleksitas sosial tersebut adalah dengan menggunakan pendekatan Agent Based Modelling (ABM). ABM merupakan suatu metode komputasi yang dapat digunakan untuk membuat, menganalisis, dan melakukan percobaan dari suatu model yang tersusun atas kumpulan agen yang saling berinteraksi dengan lingkungannya. Agen memiliki atribut untuk mencirikan karakteristik agen, selain itu terdapat aturan yang mempengaruhi hubungan antar agen dan lingkungannya. Dalam penelitian ini konstruksi model terdiri dari populasi agen yang dibagi menjadi lima kelas yaitu kelas umum / general (G), kelas bibit atau calon fanatik / seed (S), kelas fanatik aktif / active fanatic (FA), kelas fanatik non aktif / fanatic in prison (FP),

dan kelas Densus 88 (D). Beberapa atribut yang digunakan adalah usia, frekuensi pertemuan dengan anggota FA, vonis penjara serta masa tahanan anggota FP. Hasil simulasi model dengan menggunakan NetLogo 5.2 dan Mathematica 10.0 menunjukkan parameter berperan penting dalam menekan berkembangnya populasi teroris di Indonesia.;Terrorism is a menace to humanity and society and also a complex social problem. One of the methods for studying social complexity in this case is using the approach of Agent Based Modeling (ABM). ABM is a computational method that enables a researcher to create, analyze, and experiment with models composed of agents that interact within an environment. Agents have attributes to characterize them, and the rules that will affect the relationship between agents and an environment. In this research, the model construction is divided into five classes namely general class (G), class of seed (S), class of active terrorist (FA), class of terrorist in prison (FP), and Densus 88 class (D). The attributes used are age, frequency of interactions with FA, prison verdict and prison term of FP . The simulation using NetLogo 5.2 and Mathematica 10.0 shows the parameter is important in suppressing the growth of terrorist population in Indonesia.;Terrorism is a menace to humanity and society and also a complex social problem.

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