ANALISIS KERENTANAN PERUBAHAN IKLIM DAN AKSI ADAPTASI BERBASIS EKOSISTEM (*ECOSYSTEM-BASED ADAPTATION*) SENTRA TEMBAKAU DI KABUPATEN TEMANGGUNG

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INTISARI

Budidaya komoditas tembakau sangat bergantung pada kondisi cuaca sehingga termasuk sebagai elemen yang rentan terhadap perubahan iklim. Kabupaten Temanggung memiliki 8 sentra tembakau sehingga memiliki potensi penerimaan dampak perubahan iklim yang tinggi. Aksi adaptasi yang mengedepankan kelestarian dan keanekaragaman hayati sesuai dengan prinsip adaptasi berbasis ekosistem atau *ecosystem-based adaptation*/EbA penting dilakukan menurunkan kerentanan perubahan iklim sentra tembakau. Oleh karena itu, penelitian ini memiliki 3 tujuan utama, yakni mengetahui kerentanan perubahan iklim sentra tembakau di Kabupaten Temanggung, mengetahui aksi adaptasi berbasisi ekosistem yang dilakukan pada sentra tembakau di Kabupaten Temanggung dalam penanggulangan dampak perubahan iklim, serta mengetahui hubungan antara kerentanan perubahan iklim dengan aksi adaptasi berbasis ekosistem pada sentra tembakau di Kabupaten Temanggung.

Kerentanan perubahan iklim disajikan dalam *climate change vulnerability index* (CCVI) yang mengacu pada komponen paparan, sensitivitas, dan kapasitas adaptasi. Dengan pertimbangan keterbatasan ketersediaan data dan sumberdaya penelitian, kajian ini hanya menggunakan 6 indikator paparan, 7 indikator sensitivitas, dan 5 indikator kapasitas adaptasi. Masing-masing komponen kerentanan perubahan iklim juga mempertimbangkan pembobotan yang mengacu pada penilaian ahli dengan metode *analytical hierarchy process* (AHP). Sementara itu, analisis adaptasi berbasis ekosistem didasarkan pada lima dimensi hasil adaptasi berbasis ekosistem, yakni dimensi aset, ketahanan pangan, mata pencaharian, keamanan dan ketahanan sumberdaya air, serta kesehatan.

Hasil penelitian menunjukkan bahwa masing-masing kelas kerentanan perubahan iklim pada sentra tembakau memiliki karakteristik yang berbeda-beda. Semakin rendah kerentanan perubahan iklim pada suatu sentra tembakau, terdapat kecenderungan bahwa sentra memiliki kemampuan adaptasi yang baik. Terdapat 14 jenis adaptasi yang teridentifikasi dilakulan pada sentra tembakau untuk menanggulangi dampak perubahan iklim. Sebanyak 13 jenis adaptasi terindikasi bersesuaian dengan prinsip EbA sehingga dapat berkontribusi terhadap keberlanjutan lingkungan. Sentra tembakau dengan kerentanan perubahan iklim tinggi cenderung mengimplementasikan lebih banyak EbA. Hal ini menunjukkan bahwa terdapat indikasi hubungan positif antara kerentanan perubahan iklim dengan aksi adaptasi berbasis ekosistem pada sentra tembakau di Kabupaten Temanggung.

Kata kunci: kerentanan perubahan iklim, adaptasi berbasis ekosistem, sentra tembakau

CLIMATE CHANGE VULNERABILITY ANALYSIS AND
ECOSYSTEM-BASED ADAPTATION ACTIONS OF
TOBACCO HUBS IN TEMANGGUNG DISTRICT

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ABSTRACT

The cultivation of tobacco commodities is highly dependent on weather conditions so that it is included as an element that is vulnerable to climate change. Temanggung Regency has 8 tobacco hubs so that it has a high potential for receiving the impact of climate change. Adaptation actions that prioritize sustainability and biodiversity in accordance with the principles of ecosystem-based adaptation (EbA) are important to reduce the vulnerability of tobacco hubs to climate change. Therefore, this study has 3 main objectives, namely to determine the vulnerability of climate change in tobacco hubs in Temanggung Regency, to know the ecosystem-based adaptation actions carried out in tobacco hubs in Temanggung Regency to overcoming the impact of climate change, and to determine the relationship between climate change vulnerability and ecosystem-based adaptation in tobacco hubs in Temanggung Regency.

Climate change vulnerability is presented in the climate change vulnerability index (CCVI) which refers to the components of exposure, sensitivity, and adaptation capacity. Considering the limited availability of data and research resources, this study only uses 6 exposure indicators, 7 sensitivity indicators, and 5 adaptation capacity indicators. Each component of climate change vulnerability also considers weighting that refers to expert assessment using the analytical hierarchy process (AHP) method. Meanwhile, the ecosystem-based adaptation analysis is based on five dimensions, namely asset dimensions, food security, livelihoods, water resources security and security, and health.

The results of the study show that each class of climate change vulnerability in tobacco hubs has different characteristics. The lower the vulnerability to climate change in a tobacco hub, there is a tendency that the hub has good adaptability. There are 14 types of adaptations identified in tobacco hubs to overcome the impact of climate change. A total of 13 types of adaptations are indicated to be in accordance with the EbA principle so that they can contribute to environmental sustainability. Tobacco hubs with high climate change vulnerability tend to implement more EbA. This shows that there is an indication of a positive relationship between climate change vulnerability and ecosystem-based adaptation actions in tobacco hubs in Temanggung Regency.

Keywords: climate change vulnerability, ecosystem-based adaptation, tobacco hubs