```cpp
#include<iostream>
using namespace std;

#include<vector>
void printMat(vector<vector<int>>);
void checkLands(vector<vector<int>>& mat,int i,int j){
    if(i<0 || j<0 || i>mat.size()-1 || j>mat[0].size()-1){
        return;
    }

    if(mat[i][j]==0){
        mat[i][j]=1;
        checkLands(mat,i-1,j);
        checkLands(mat,i,j-1);
        checkLands(mat,i,j+1);
        checkLands(mat,i+1,j);
    }

}
int coutnNumberOfWaterBody(vector<vector<int>> mat){
    int n = mat.size();
    int m = mat[0].size();
    int number_of_water_body = 0;
    for(int i=0;i<n;i++){
        for(int j=0;j<m;j++){
            if(mat[i][j]==0){
                number_of_water_body+=1;
                checkLands(mat,i,j);
            }
        }
    }
    // printMat(mat);
    return number_of_water_body;
}
void printMat(vector<vector<int>> mat){
    for(int i=0;i<mat.size();i++){
        for(int j=0;j<mat[0].size();j++){
            cout<<mat[i][j];
        }
        cout<<endl;
    }
}
int main(){
    // vector<vector<int>> mat =  { { 1, 1, 0, 0, 0 },
    //                              { 0, 1, 0, 0, 1 },
    //                              { 1, 0, 0, 1, 1 },
    //                              { 0, 0, 0, 0, 0 },
    //                              { 1, 0, 1, 0, 1 } };
    vector<vector<int>> mat =  { { 0, 0, 1, 0, 0 },
                                 { 0, 1, 1, 0, 0 },
                                 { 1, 0, 1, 0, 1 },
                                 { 0, 0, 1, 0, 1 },
                                 { 1, 1, 0, 1, 1 } };
    int res = coutnNumberOfWaterBody(mat);
    // printMat(mat);
    cout<<"number of water body = "<<res;

    return 0;
}
```