import mongoose from "mongoose";

// 🔹 Common Fields

const commonFields = {

fiscalYear: { type: String, required: true }, // অর্থবছর

district: { type: String, required: true }, // জেলা

upazila: { type: String, required: true }, // উপজেলা

union: { type: String }, // ইউনিয়ন

season: { type: String } // মৌসুম

};

// 🔹 1. Overview Card

const overviewSchema = new mongoose.Schema({

...commonFields,

generalInfo: {

upazilaCount: Number,

unionCount: Number,

block: Number,

population: Number,

area: Number,

farmerGroups: Number

},

foodGrain: { demand: Number, production: Number },

oilSeed: { demand: Number, production: Number },

pulses: { demand: Number, production: Number },

crops: {

cropIntensity: Number,

singleCropLand: Number,

doubleCropLand: Number,

tripleCropLand: Number,

totalCropLand: Number

},

waterManagement: {

khal: Number,

excavatable: Number,

embankment: Number,

embankmentLength: Number,

sluiceGate: Number,

repairable: Number

}

});

// 🔹 2. Production & Cultivation Card

const productionSchema = new mongoose.Schema({

...commonFields,

seedbed: [{ variety: String, target: Number, achievement: Number }],

cultivation: [{ variety: String, target: Number, achievement: Number }],

harvest: [{ variety: String, yieldPerHectare: Number, totalYield: Number }]

});

// 🔹 3. Fertilizer Distribution

const fertilizerSchema = new mongoose.Schema({

...commonFields,

fertilizer: [

{ type: { type: String }, allocated: Number, distributed: Number, unit: String }

],

pesticide: [

{ type: { type: String }, allocated: Number, distributed: Number, unit: String }

]

});

// 🔹 4. Irrigation Info

const irrigationSchema = new mongoose.Schema({

...commonFields,

irrigationSources: {

deepTubeWell: Number,

shallowTubeWell: Number,

lowLiftPump: Number,

manualPump: Number,

others: Number

},

irrigatedArea: Number

});

// 🔹 5. Crop Damage Report

const cropDamageSchema = new mongoose.Schema({

...commonFields,

damages: [

{ cause: String, affectedArea: Number, cropLoss: Number, unit: String }

]

});

// 🔹 6. Training & Farmer Group

const trainingSchema = new mongoose.Schema({

...commonFields,

trainings: [

{ topic: String, numberOfFarmers: Number, date: Date }

],

farmerGroups: Number

});

// 🔹 7. Seed Distribution

const seedDistributionSchema = new mongoose.Schema({

...commonFields,

seeds: [

{ crop: String, variety: String, allocated: Number, distributed: Number, unit: String }

]

});

// 🔹 8. Farm Machinery

const machinerySchema = new mongoose.Schema({

...commonFields,

machinery: [

{ type: String, available: Number, functional: Number, nonFunctional: Number }

]

});

// 🔹 9. Market Info

const marketSchema = new mongoose.Schema({

...commonFields,

markets: [

{ name: String, type: String, storageCapacity: Number, traders: Number }

]

});

// 🔹 10. Export & Import

const tradeSchema = new mongoose.Schema({

...commonFields,

export: [{ crop: String, quantity: Number, unit: String, destination: String }],

import: [{ crop: String, quantity: Number, unit: String, source: String }]

});

// 🔹 11. Weather & Climate

const weatherSchema = new mongoose.Schema({

...commonFields,

rainfall: Number,

temperature: { min: Number, max: Number },

disasters: [{ type: String, affectedArea: Number }]

});

// 🔹 12. Soil Fertility

const soilSchema = new mongoose.Schema({

...commonFields,

soilType: String,

organicMatter: Number,

fertilityStatus: String,

phLevel: Number

});

// 🔹 13. Livestock

const livestockSchema = new mongoose.Schema({

...commonFields,

livestock: [

{ type: String, count: Number, vaccinated: Number }

]

});

// 🔹 14. Fisheries

const fisheriesSchema = new mongoose.Schema({

...commonFields,

ponds: Number,

cultivatedArea: Number,

production: Number,

species: [{ name: String, production: Number }]

});

// Export Models

export const Overview = mongoose.model("Overview", overviewSchema);

export const Production = mongoose.model("Production", productionSchema);

export const Fertilizer = mongoose.model("Fertilizer", fertilizerSchema);

export const Irrigation = mongoose.model("Irrigation", irrigationSchema);

export const CropDamage = mongoose.model("CropDamage", cropDamageSchema);

export const Training = mongoose.model("Training", trainingSchema);

export const SeedDistribution = mongoose.model("SeedDistribution", seedDistributionSchema);

export const Machinery = mongoose.model("Machinery", machinerySchema);

export const Market = mongoose.model("Market", marketSchema);

export const Trade = mongoose.model("Trade", tradeSchema);

export const Weather = mongoose.model("Weather", weatherSchema);

export const Soil = mongoose.model("Soil", soilSchema);

export const Livestock = mongoose.model("Livestock", livestockSchema);

export const Fisheries = mongoose.model("Fisheries", fisheriesSchema);