


# LAMPIRAN

## 1. Surat Balasan dari Bakesbang ( Badan Kesatuan Bangsa)

**PEMERINTAH KABUPATEN PONOROGO**  
**BADAN KESATUAN BANGSA DAN POLITIK**  
Jl. Aloun-aloun Utara Nomor 6 Telepon (0352) 483852  
**PONOROGO**  
Kode Pos 63413

**REKOMENDASI**  
Nomor : 072 / 066 / 405.19 / 2017

Berdasarkan surat Dekan Fakultas Teknik Universitas Muhammadiyah Ponorogo, tanggal 13 Januari 2017, Nomor : 013/III-5/KM/2017, perihal Permohonan Ijin Penelitian.

Dengan ini Kepala Badan Kesatuan Bangsa dan Politik Kabupaten Ponorogo memberikan Rekomendasi kepada :

Nama Peneliti : **MAYA ARIANI PUTRI**  
Mhs. Fakultas Teknik Universitas Muhammadiyah Ponorogo

Alamat : Jl. Bonang Raya Gg. 4 No 10 RT. 008 RW. 007 Kel/Desa  
Jatirasa Kec. Jatiasih Kota. Bekasi Prov. Jawa Barat

Thema / Acara Survey / Research / PKL/ Pengumpulan data/Magang : **" Sistem Informasi Geografis Pemetaan Lahan Pertanian di Kabupaten Ponorogo Berbasis Web "**

Daerah/ Tempat dilakukan PKN/ Survey/ Pengumpulan Data : Dinas Pertanian Dan Perikanan Kab. Ponorogo

Tujuan Penelitian : Penyusunan Sripsi / Tugas Akhir

Tanggal dan atau Lamanya Penelitian : 2 (Dua) Bulan Sejak Tanggal Surat Dikeluarkan.

Bidang Penelitian : Teknik Informatika

Status Penelitian : Baru

Nama Penanggungjawab / Koordinator Penelitian : **Ir. ALIYADI, MM, M.Kom.**  
Dekan Fakultas Teknik Universitas Muhammadiyah Ponorogo

Anggota Peneliti : -


Nama Lembaga : Universitas Muhammadiyah Ponorogo.

Dengan ketentuan-ketentuan sebaqai berikut :

1. Dalam jangka waktu 1 X 24 jam setelah tiba ditempat yang dituju diwajibkan melaporkan kedatangannya kepada Camat setempat ;
2. Mentaati ketentuan- ketentuan yang berlaku dalam Daerah Hukum Pemerintah setempat ;
3. Menjaga tata tertib, keamanan, kesopanan dan kesucilaan serta menghindari pernyataan baik dengan lisan ataupun tulisan / lukisan yang dapat melukai / menyinggung perasaan atau menghina Agama, Bangsa dan Negara dari suatu golongan penduduk ;
4. Tidak diperkenankan menjalankan kegiatan-kegiatan diluar ketentuan-ketentuan yang telah ditetapkan seperti tersebut diatas ;
5. Setelah berakhirnya dilakukan Survey/ Research/ PKL diwajibkan terlebih dahulu melaporkan kepada Pejabat Pemerintah setempat mengenai selesainya pelaksanaan Survey / Research / PKL, sebelum meninggalkan daerah tempat Survey / Research / PKL ;
6. Dalam jangka waktu 1 (satu) bulan setelah selesai dilakukan Survey / Research / PKL diwajibkan memberikan laporan tentang pelaksanaan dan hasil-hasilnya kepada :  
- Kepala Badan Kesatuan Bangsa, Politik dan Perlindungan Masyarakat Kabupaten Ponorogo.
7. Surat Keterangan ini akan dinyatakan tidak berlaku apabila ternyata bahwa pemegang Surat Keterangan ini tidak memenuhi ketentuan-ketentuan sebagaimana tersebut diatas.

Demikian untuk menjadikan perhatian dan guna seperlunya.

Ponorogo, 23 Januari 2017  
**KEPALA BADAN KESATUAN BANGSA DAN POLITIK**  
**KABUPATEN PONOROGO**

  
**Drs. H. MURDIJANTO, M.Si**  
Pembina Tingkat I  
NIP. 19640514 198903 1 010

**Tembusan :**  
Yth. Dekan Fak. Teknik UNMUH  
Ponorogo

## 2. Source Code Program

### 1. Index.php

```
<style>
#gmap0-map-canvas {
  bottom: 0;
  left: 0;
  position: absolute !important;
  right: 0;
  top: 0;
  width: 100%;
  height: 100%;
}
</style>
<div class="gis-index">
  <div class="form">
    <?php $form = ActiveForm::begin(['method' => 'get']); ?>

    <?= $form->field($model, 'data')->widget(Select2::classname(), [
      'data' => ['periode-tanam' => 'Periode Tanam', 'periode-panen' => 'Periode
Panen', 'harga-hasil-pertanian' => 'Harga Hasil Pertanian', 'jenis-tanah' => 'Jenis
Tanah', 'jenis-lahan' => 'Jenis Lahan', 'curah-hujan' => 'Curah Hujan'],
      'options' => ['placeholder' => 'Pilih Data ...',
      'onchange' => 'if($(this).val() == "jenis-lahan" || $(this).val() == "jenis-
tanah"){
        $(".field-gisview-year").hide();
        $(".field-gisview-komoditas").hide();
      }else if($(this).val() == "curah-hujan"){
        $(".field-gisview-year").show();
        $(".field-gisview-komoditas").hide();
      }else{
        $(".field-gisview-year").show();
        $(".field-gisview-komoditas").show();
      }'],
      'pluginOptions' => [
        'allowClear' => true
      ],
    ]->label('Data'); ?>

    <?= $form->field($model, 'year')->widget(DatePicker::classname(), [
      'options' => ['placeholder' => 'Bulan - Tahun'],
      'pluginOptions' => [
        'autoclose' => true,
```

```

        'startView'=>'year',
        'minViewMode'=>'months',
        'format' => 'mm-yyyy'
    ]
] ?>

```

```

<?= $form->field($model, 'komoditas')->widget(Select2::classname(), [
    'data' => $dataPertanian,
    'options' => ['placeholder' => 'Pilih Komoditas ...'],
    'pluginOptions' => [
        'allowClear' => true
    ],
])->label('Komoditas'); ?>

```

```

<div class="form-group text-center">
    <?= Html::submitButton('Cari', ['class' => 'btn btn-success btn-submit']) ?>
</div>

```

```

<?php ActiveForm::end(); ?>
</div>

```

```

<?php

```

```

function percent2Color($value,$brightness = 255, $max = 100,$min = 0,
$thirdColorHex = '00')
{
    // Calculate first and second color (Inverse relationship)
    $first = (1-($value/$max))*$brightness;
    $second = ($value/$max)*$brightness;

    // Find the influence of the middle color (yellow if 1st and 2nd are red and green)
    $diff = abs($first-$second);
    $influence = ($brightness-$diff)/2;
    $first = intval($first + $influence);
    $second = intval($second + $influence);

    // Convert to HEX, format and return
    $firstHex = str_pad(dechex($first),2,0,STR_PAD_LEFT);
    $secondHex = str_pad(dechex($second),2,0,STR_PAD_LEFT);

    return $firstHex . $secondHex . $thirdColorHex ;

    // alternatives:

```

```

// return $thirdColorHex . $firstHex . $secondHex;
// return $firstHex . $thirdColorHex . $secondHex;

}

//var_dump($data);
$coord = new LatLng(['lat' => -7.871234, 'lng' => 111.462693]);
$map = new Map([
    'center' => $coord,
    'zoom' => 10,
]);
foreach ($data as $key => $value) {
    $wkt = $value['polygon'];

    /* Use Regex to do a quick parse on the WKT string. */
    $tmp = explode( 'POLYGON', $wkt );
    $tmp = explode( '\\(', $tmp [ 1 ] );
    $tmp = explode( '\\)', $tmp [ 0 ] );
    if($value['kecamatan'] === 'Ngebel'){
        $tmp = explode( ',(', $tmp [ 0 ] );
        $tmp = $tmp[0].!.$tmp[1];
    }else{
        $tmp = $tmp[0];
    }

    /* Now explode this string on commas (if any)
       String is X11 Y11 X12 Y12 ... , X21 Y21 X22 Y22 ... , ... */
    $polygons = explode ( ',', $tmp );

    /* Loop over polygons and explode (in this case on white space
       Each element will therefore be a list of points */
    $coords = array();
    /*var_dump($tmp);
    exit();*/
    foreach ( $polygons as $polygon ) {
        $point = explode ( ' ', $polygon );
        $point[0] = str_replace(")", "", $point[0]);
        $point[0] = str_replace("(" , "", $point[0]);
        $point[1] = str_replace("(" , "", $point[1]);
        $point[1] = str_replace(")", "", $point[1]);
        /*print "Lng=" . $point [ 0 ] . " Lat=" . $point[ 1 ] . """;
        echo "<br>";*/
        $coordinate = new LatLng(['lat' => $point[1], 'lng' => $point[0]]);
        array_push($coords, $coordinate);
    }
}

```

```

}
/*$coord = [
    new LatLng(['lat' => 25.774252, 'lng' => -80.190262]),
    new LatLng(['lat' => 18.466465, 'lng' => -66.118292]),
    new LatLng(['lat' => 32.321384, 'lng' => -64.75737]),
    new LatLng(['lat' => 25.774252, 'lng' => -80.190262])
];*/
//var_dump($coord);
//var_dump($coords);
//exit();

$color = percent2Color($value['percent']);

$polygon = new Polygon([
    'paths' => $coords,
    'strokeColor' => '#'.$color,
    'strokeOpacity' => 0.8,
    'fillColor' => '#'.$color,
    'fillOpacity' => 0.5,
]);
/*var_dump($coords);
exit();*/
// Add a shared info window
if($model->data == 'jenis-tanah' || $model->data == 'jenis-lahan'){
    $polygon->attachInfoWindow(new InfoWindow([
        'content' => '<p>Kecamatan : '. $value['kecamatan'] .
            '<br>Jenis Tanah : '. $value['nama'] .'
            <br>Percent : '. $value['percent'] .</p>'
    ]));
}elseif($model->data == 'curah-hujan'){
    $polygon->attachInfoWindow(new InfoWindow([
        'content' => '<p>Kecamatan : '. $value['kecamatan'] .
            '<br>Volume : '. $value['luas'] .'
            <br>Percent : '. $value['percent'] .</p>'
    ]));
}else{
    $polygon->attachInfoWindow(new InfoWindow([
        'content' => '<p>Kecamatan : '. $value['kecamatan'] .
            '<br>Luas : '. $value['luas'] .'
            <br>Percent : '. $value['percent'] .</p>'
    ]));
}

// Add it now to the map

```

```

    $map->addOverlay($polygon);
}

    echo $map->display();

?>
</div>

```

## 2. GisController.php

```

namespace frontend\controllers;

use Yii;

use frontend\models\GisView;

use common\models\HargaHasilPertanian;

use yii\data\ArrayDataProvider;

class GisController extends \yii\web\Controller
{
    public function actionIndex()
    {
        $model = new GisView();

        if ($model->load(Yii::$app->request->get())) {

            //var_dump($model);

            $db = Yii::$app->getDb();

            switch ($model->data) {

                case 'periode-panen':

                    $total = $db->createCommand("SELECT sum(luas) as total FROM
`periode_panen`, kecamatan WHERE kecamatan.OGR_FID =
periode_panen.kecamatan and date = '". $model->year ." AND jenis_pertanian = ".
$model->komoditas ."")->queryAll();

                    if($total[0]['total'] === NULL){

                        $total[0]['total'] = 0;

```

```

}

$data = $db->createCommand("SELECT kecamatan.kecamatan,
    ST_AsText(SHAPE) as polygon, luas, date, (luas/" . $total[0]['total'] . ")*100 as
    percent FROM `periode_panen`, kecamatan WHERE kecamatan.OGR_FID =
    periode_panen.kecamatan AND date LIKE '%" . $model->year ."' AND
    jenis_pertanian = " . $model->komoditas ."' ORDER BY luas")->queryAll();

break;

case 'periode-tanam':

$total = $db->createCommand("SELECT sum(luas) as total FROM
    `periode_tanam`, kecamatan WHERE kecamatan.OGR_FID =
    periode_tanam.kecamatan and date = '" . $model->year ."' AND jenis_pertanian = " .
    $model->komoditas ."'")->queryAll();

if($total[0]['total'] === NULL){

$total[0]['total'] = 0;

}

$data = $db->createCommand("SELECT kecamatan.kecamatan,
    ST_AsText(SHAPE) as polygon, luas, date, (luas/" . $total[0]['total'] . ")*100 as
    percent FROM `periode_tanam`, kecamatan WHERE kecamatan.OGR_FID =
    periode_tanam.kecamatan AND date LIKE '%" . $model->year ."' AND
    jenis_pertanian = " . $model->komoditas ."' ORDER BY luas")->queryAll();

break;

case 'harga-hasil-pertanian':

$total = $db->createCommand("SELECT sum(harga) as total FROM
    `harga_hasil_pertanian`, kecamatan WHERE kecamatan.OGR_FID =
    harga_hasil_pertanian.kecamatan and date = '" . $model->year ."' AND
    jenis_pertanian = " . $model->komoditas ."'")->queryAll();

/*var_dump($total[0]['total']);

exit();*/

if($total[0]['total'] === NULL){

$total[0]['total'] = 0;

}

        $data = $db->createCommand("SELECT kecamatan.kecamatan,
        ST_AsText(SHAPE) as polygon, harga as luas, date, (harga/" . $total[0]['total']

```



```
.) *100 as percent FROM `harga_hasil_pertanian`, kecamatan WHERE
kecamatan.OGR_FID = harga_hasil_pertanian.kecamatan AND date LIKE "%".
$model->year ." AND jenis_pertanian = ". $model->komoditas ." ORDER BY
luas")->queryAll();
```

```
/*foreach ($data as $key => $value) {
```

```
var_dump($value['percent']);
```

```
echo "<br>";
```

```
*/
```

```
break;
```

```
case 'jenis-tanah':
```

```
$total = $db->createCommand("SELECT COUNT(id) as total FROM
`jenis_tanah`")->queryAll();
```

```
$data = $db->createCommand("SELECT kecamatan.kecamatan,
ST_AsText(SHAPE) as polygon, jenis_tanah.nama as nama, ((jenis_tanah/"
$total[0]['total'] .") *100) as percent FROM `tanah`, kecamatan, jenis_tanah
WHERE kecamatan.OGR_FID = tanah.id_kecamatan and jenis_tanah.id =
tanah.jenis_tanah")->queryAll();
```

```
break;
```

```
case 'jenis-lahan':
```

```
$total = $db->createCommand("SELECT COUNT(id) as total FROM
`jenis_lahan`")->queryAll();
```

```
$data = $db->createCommand("SELECT kecamatan.kecamatan,
ST_AsText(SHAPE) as polygon, jenis_lahan.nama as nama, ((jenis_lahan/"
$total[0]['total'] .") *100) as percent FROM `lahan`, kecamatan, jenis_lahan
WHERE kecamatan.OGR_FID = lahan.id_kecamatan and jenis_lahan.id =
lahan.jenis_lahan")->queryAll();
```

```
break;
```

```
case 'curah-hujan':
```

```
$total = $db->createCommand("SELECT sum(volume) as total FROM
`curah_hujan`, kecamatan WHERE kecamatan.OGR_FID =
curah_hujan.id_kecamatan and date = '". $model->year."'")->queryAll();
```

```
if($total[0]['total'] === NULL){
```

```
$total[0]['total'] = 0;
```